THIS WEEK'S National Petroleum NEWS

Index to Coming Meetings

Tennessee Oil Men's Association, Hermitage Hotel, Nashville, Aug. 19, 20.

North American Gasoline Tax Conference, King Edward Hotel, Toronto, Ont., Sept. 2, 3, 4.

American Petroleum Institute, Division of Production, Southwestern District, Buccaneer Hotel, Galveston, Tex., Sept. 4, 5.

American Chemical Society, Hotel Gibson, Cincinnati, O., Sept. 8 to 12.

Ohio Petroleum Marketers Association, Deshler-Wallick Hotel, Columbus, O., Sept. 17.

National Petroleum Association, Hotel Traymore, Atlantic City, N. J., Sept. 17, 18, 19.

National Safety Council, Petroleum Section, Pittsburgh, Pa., Sept. 29 to Oct. 4.

International Petroleum Exposition and Congress, Tulsa, Oct. 4 to 11.

Big Four State Jobbers Convention, (Missouri, Iowa, Kansas and Nebraska) Kansas City, Mo., Oct. 14, 15, 16.

National Association of Credit Men, Petroleum Refiners Division, St. Louis, Mo., Oct. 20, 21, 22.

Independent Oil Men of America, Marketing Congress and Exhibit, Statler Hotel, St. Louis, Mo., Nov. 2, 3, 4, 5.

American Petroleum Institute, Stevens Hotel, Chicago, Nov. 10 to 13.

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COLONEL T. H. BARTON, president of the Lion Oil & Refining Co., El Dorado, Ark., is a Texan who has been associated closely with oil and gas operations since his school days except for the time when he was in the military service.

During the war Colonel Barton saw active service in both the infantry and cavalry. He now holds the rank of Colonel in the cavalry reserve corps.

In 1921 Colonel Barton organized the El Dorado Natural Gas Co. which later became the Natural Gas & Fuel Corp. and then was merged with the Arkansas Natural Gas Corp. He was elected to the presidency of the Lion in 1929. He is interested as an officer and director in a number of other companies. He is president also of the Arkansas State Chamber of Commerce.

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Vol. 22 CLEVELAND, August 6 No. 32

Texans Ask Refiners and Importers To Reduce Gasoline Supply

By Paul Wagner
N. P. N. STAFF WRITER

AUSTIN, Texas, Aug. 1 REFINERS of the country and oil companies importing gasoline and other petroleum products, particularly from South America, have been called upon by Texas operators —in the throes of their own proration program—to take a more decisive part in the industry's general curtailment program in the interests of conservation.

Meeting here July 30 to iron out their own problems, the Texas operators adopted a resolution stating that the present rate of gasoline manufacture and imports "endangered and tended to nullify all curtailment and conservation measures in this country."

The resolution pointed out an increase of 72,000 barrels per day in daily average crude runs to stills by refiners in this country for the week ended July 26, 1930, bringing total runs to stills to 2,500,600 barrels per day, total gasoline stocks in the United States now being given as 44,751,000 barrels.

The resolution was adopted at a brief meeting of operators at the capitol, which followed a meeting held in the senate chamber sponsored by the state railroad commission, at which the operators had submitted recommendations for further curtailment of the production from the state's field to be brought about through enforcement of the new state common purchaser pipeline law.

At this earlier meeting, at the request of C. C. Wild, executive secretary of the Independent Petroleum (Producers) Association, the state commission had called upon representatives of major oil companies for expression of opinion on curtailment of imports and further slowing down of refining operations in this country.

Three executives of such interests had stated their companies either had already put restrictive measures into effect, or were ready to do so.

President U. de B. Daly of Shell Petroleum Corp., St. Louis, said he was authorized to announce on behalf of the parent Shell Union Oil Corp., New York, that stabilization agreed to in Venezuela was "being conformed to"; and that the Shell interests had exported from the Gulf Coast and California in the first five months of the year more gasoline than they had imported.

He said net exports of the Shell Union, through its subsidiaries, after deducting imports, were in excess of two million barrels in the five months.

Underwood Nazro, ranking vice president of Gulf Corp. sub-

Texas Curtailment

RECOMMENDATIONS of the advisory committee of Texas operators to the Railroad Commission of the state at the meeting in Austin, July 30, for further cuts in production in various districts in the state were as follows; figures in barrels daily average:

Field or District	Production Late in July	Under Proposed Proration
Panhandle	96,450	80,000
Greater Wichita Falls	74,450	69,000
General Ranger	55,700	52,000
West Texas	293,950	276,350
East Texas	39,350	39,350
Southwest Texas	72,400	66,150
Gulf Coastal	183,500	150,500

This amounts to a total reduction, in the districts as named, from 815,800 barrels daily to 733,350 barrels.

sidiaries in the southwest, said that for the last year his company had imported no oil from Mexico, and had imported no gasoline, or finished products, from Venezuela.

President W. S. Farish of Humble Oil & Refining Co., speaking as a director of Standard Oil Co. of New Jersey, referred to that company as importing no gasoline or products and producing relatively small quantities of crude oil in Venezuela.

No representative of the fourth major importer Pan American Petroleum & Transport Co., was present. President E. G. Seubert of the parent Standard Oil Co. of Indiana, however, had previously advised the Houston office of NATIONAL PETROLEUM NEWS, "our production in Venezuela is curtailed materially; (we are) producing only sufficient products to meet requirements of our own business."

Messrs. Nazro, Farish and Daly all described their companies as favoring prorating practice.

Robert R. Penn, vice chairman of the Mid-Continent Oil & Gas Association's Texas division steering committee, presided at the meeting of operators at which the resolution was drawn.

Oil operators of the southwest and the Texas railroad commission are as one in wanting a test of the state's new pipeline law, under which it is proposed to further prorate the state's production to a maximum of 746,950 barrels daily. The state's output for the week ended July 26 was about 830,000 barrels daily average, according to the American Petroleum Institute figures.

This unanimity of desire for a test of the new law was brought out at the meeting of operators with the commission at Austin, July 30.

Chairman of the commission, Pat M. Neff, told operators he favors "operating under the law —and vigorously," but, if the statute will not hold legally, then "let us know it."

Mr. Penn had previously said that, "unless the railroad commission can stem the tide (of overproduction) we will have in Texas in the next few months a calamity comparable only to the condition in the old Spindletop field when oil prices dropped to three and four cents a barrel."

Mr. Penn expressed confidence in the pipeline law, but added that the operators wanted it tested in the courts so that if "found wanting" the governnor could be asked to convene a special session of the legislature to enact a statute that would be effective.

Except for Mr. Penn's reference to the Darst Creek prorating collapse as a situation "of the very greatest gravity and the greatest emergency," the opening of that Guadalupe county field to approximately 75,000 barrels daily was not specifically brought into the commission hearing.

Temporary injunction issued on behalf of the Harrison Oil Co., and J. S. Abercrombie, Inc., of Houston, prevents enforcement of Darst Creek prorating at the contemplated field schedule of 20,389 barrels daily.[1]

First application of the common purchaser law will be made at a railroad commission hearing, Aug. 6, when three producers in the Salt Flat field, nine miles northeast of Darst Creek, are heard on a prorating petition. Nash & Windfohr, H. L. Brown and the Golden West Oil Co. recently found themselves without connections when a small refinery to which they had been selling oil was shut down. Shell Pipe Line Corp. agreed to give them temporary accommodations and is running their oil pending prorating steps.

Suggested statewide regulations under the common purchaser law contemplated curtailment, effective for 90 days from Aug. 1, the railroad commission to locate and correct any inequalities in the handling or marketing of Texas production.

The commission was told that the Howard-Glasscock county policy of Cosden Oil Co., Inc., in buying half and storing half of the oil from leases to which it had been connected in the western part of the area brought about inequality of market outlet; and the Continental Oil Co.'s 50 per cent reduction in Wichita Falls district runs was also cited, because, it was said, other buyers continued taking 100 per cent of the oil from adjoining properties.

Opinion among operators was that ways and means of reducing curtailment to equitable levels as between districts should be left to field committees working with the general committee which in turn should be responsible to the railroad commission.

The burden of prorating

(*Continued on Page* 22)

To Settle Darst Creek Proration Tangle

By Telegraph

HOUSTON, Tex., August 4. —Settlement out of court of the Darst Creek prorating debacle was in process of adjustment August 4, when operators met at Luling to fix production percentages in line with a field maximum approximating 44,000 barrels daily.

For a week the field had been exploited at 65,000 to 90,000 barrels daily as compared with earlier prorating schedules approximating 25,000 barrels and an August 1 allowance that had been fixed under state orders at 20,389 barrels daily.

Potential production at Darst Creek has been about 200,000 barrels daily.

The new prorating schedule recognized Louisiana Oil Refining Corp.'s necessity for exploiting 4500 barrels daily in line with its property purchase contract with United North & South Developing Co., which had caused it to flout curtailment in line with its allowance of approximately 2300 barrels daily.

Prorating allowances by companies under the new schedule follow: Humble Oil & Refining Co. 7500 barrels; The Texas Co. 10,500 barrels; Gulf Production Co. 8150 barrels; Louisiana Oil Refining Corp. 4500 barrels; Magnolia Petroleum Co. 5680 barrels; Sun Oil Co. 3500 barrels; Abercrombie & Harrison 1750 barrels; Empire Oil & Refining Co. 1050 barrels; L. C. Turman 160 barrels; Cranfill & Reynolds 100 barrels; Jake Jarman 210 barrels; Penn Oil Co. 150 barrels; Trinity Drillers 365 barrels.

[1] NATONAL PETROLEUM NEWS, July 30, 1930.

The Editors' Viewpoint

Voluntary Proration Must Carry On

THE forthcoming order of the Texas railroad commission further reducing allowed production in that state to 746,950 barrels will be welcomed by the majorty of operators in that state.

To those outside Texas it is an assurance of the team work which is the most necessary requirement of the oil industry today.

In the light of events of the past year it is becoming more evident that a formal order of some state commission will not in itself accomplish the curtailment in crude production, in fields, and in states, that is so necessary today to the future welfare of the industry. The mere enactment of a law will not turn the trick.

At the best these in reality only constitute the machinery for carrying out a program of conservation conceived and concurred in wholeheartedly by the oil industry. There must be the will on the part of the rank and file of producers, each to do his part, be it large or small. There must be the will on the part of the rank and file of refiners to do what they can to help the program and, likewise, on the part of the marketer there must be the helpful understanding of the needs of the hour and the will to assist in whatever measure he can.

Within the past year, in two states measures have been enacted which those who pressed for their passage believed would go far towards taking from the producing industry itself the burden of carrying on the proration programs.

More than a year ago California passed its gas conservation statute, which was in good part drawn up by the oil companies themselves. It was earnestly thought that law would be in operation in a few months, thus providing a means for holding crude production to market demands under state supervision. What actually happened was the certain interests took the opportunity to attack the legal provisions of that statute, perhaps more vigorously than they would have seen fit to attack a purely voluntary program undertaken by the industry itself in the interests of conservation.

The result has been that the principles sought to be established by the passage of the California law have been lost sight of in the legal maze of injunctions, writs and so on. What the end will be no one can yet say; but there is certainly the doubt if the California conservation statute will ever become actually effective.

But the oil companies there saved the day for themselves by assuming again the voluntary curtailment program, administered by umpires of their own selection, which they virtually dropped when the state law was passed. They have carried on successfully, the 90, or 95 or 98 per cent of the industry that enlisted in the program.

Just recently Texas, at the instigation of independent producers, passed its common carrier pipeline statute, the purpose of which is to bring about the same kind of regulation of production under state supervision as was planned in California. The constitutionality of that statute is now to be tested under an injunction suit already started.

Such tests of a form of legislation new to the oil industry—in fact new to industry generally—are necessary and desirable. If such action is brought only to delay enforcing the new law then the new law in Texas may go through the same tedious delays as the California conservation statute. What both laws attempt to set up as a principle, in short, is the right of a majority of producers in a given field, or a state, to compel an unwilling minority to take part in a conservation program.

That is a new enough principle to industry generally that laws based upon it will have to be staunchly upheld in the courts as to their constitutionality before they will be accepted widely.

With all due respect for the new law in Texas, the problem of the operators there, the same as for operators in all states with flush production, remains just what it was six months ago and even before that—the estimating ahead of the market for crude oil produced in the various fields and districts of the state and the holding of production there to that figure.

For the producer of crude this is complicated by the necessity of apportioning what oil can be taken from a field or district equitably to all producers there. But this has been overcome by the cooperative effort of the industry.

For the refiner the problem is actually more simple—individually making only such gasoline the remainder of the year as is necessary to meet demand and reduce the plant's stocks to where they are no more than necessary working stocks.

Perhaps in due time, state laws may provide better machinery for working to the desired end, at least as far as the producing industry is concerned; but they can hardly take the place of the will on the part of the industry to accomplish this end.

(Continued from Page 20)

would be placed on flush fields, the Mid-Continent association committee specifically pointing out that:

"Some fields within this state have been producing for many years, and the production from these old wells is in such condition that to enforce proration against these wells would, from a practical standpoint, operate to destroy them.

"Other wells are producing such a quantity of water along with the oil that to curtail the operation of such wells would permit water encroachment to such an extent as to destroy the wells and, thereby, in each instance forever destroy the amount of oil ultimately recoverable through such wells.

"To destroy the amount of oil recoverable through any well now in operation is an actual waste. Many wells within this state are being operated solely with the view to producing oil therefrom, and the gas which is being produced along with the oil is being permitted to escape and to be actually wasted; because to conserve the gas thus being produced would result in diminution of the oil being produced. Many wells are now being drilled with no hope but that the oil produced will be either stored at a resulting waste or become an additional burden to an already overcrowded market."

It was recommended that "should any new pool be brought in during this proration period, or any extension thereof, as the result of drilling in progress at effective date of the commission's order, or as result of drilling done pursuant to contract in existence as of such effective date, then production of such new pool shall be limited to such amount as commission upon hearing shall then determine."

Recommendation was also made that new wells in old pools drilled after effective date of commission order should be divided into two classes:

(a) Wells, the drilling of which was made necessary to protect the lease premises on which same were drilled from offset drainage and/or forfeiture.

(b) All other wells in old pools.

That the production from class (a) new wells be run in with the production from the lease on which same are respectively situated, and be figured in arriving at the then average daily production per well per lease; that the production from class (b) new wells be shut in and not produced during the proration period, or any extension thereof, except in such manner as the commission after proper hearing shall allow.

Legal representatives of Continental Oil Co., Ponca City, asked a special hearing regarding the proposal to reduce Big Lake field production 6600 barrels from 20,000 barrels daily present exploitation of the two interests controlling the district approximating 11,000 barrels from the upper (2800 foot) pay and 9000 barrels from the 8200-8500 foot horizon.

To Reduce California Output in August

LOS ANGELES, Aug. 1.—The California advisory committee approved proration schedules for Aug. 1-15 setting a total allotment for the state of 603,568 barrels. This is a reduction of 1935 barrels under July 16-31 figures.

In the report drawn up, the fact finding committee of operators it was indicated that exclusive of Playa del Rey in Group Three, remaining fields of the state showed a net underproduction of 1853 barrels per day in the last half of July. A 5500-barrel excess at this field resulted in a state excess of 3647 barrels daily.

While daily production decreased 803 barrels over the two-week period, the state's potential output increased 4110 barrels. Sizeable completions at Long Beach, Playa del Rey, and Elwood were largely responsible for the greater possible daily yield.

For the most part proration is readily accepted by California operators. The few remaining "holdouts" cut only a slight figure in the state-wide movement. Major operators in the local industry continue to make the necessary sacrifices and adjustments to absorb excesses that might otherwise impair curtailment measures.

In this matter of adjustments all San Joaquin Valley fields in Group One are required to make a 49 per cent cut of potential production during August. At Santa Fe Springs the curtailment of daily possible production will be 48.9 per cent in contrast to the figure of 47.9 per cent required of other Group One fields.

Kettleman Hills will be required to cut 83.83 per cent under its present potential of 83,500 barrels per day and Playa de Rey is to cut 47.83 per cent from its present potential of 11,500 barrels per day.

"Catch the Rabbit First", Says Mr. Clark

CLEVELAND, Aug. 5.—The large-scale hydrogenation plant of the Standard Oil Co. of New Jersey started its initial operation the first of August, as scheduled, according to E. M. Clark, vice-president.

It was announced some time ago that this plant, which has been building for some months and the design of which was determined upon after carrying out a considerable amount of small-scale operation of the process at the Bayway plant, would operate for a month. This run should yield important information regarding the results obtainable from the process in regular plant operation.

It has also been announced that, as soon as the data from this run has been assembled and studied, a complete report of the results obtained will be made public. The company of American refining engineers which left the latter part of July for Germany where they will study the developments of the process by German technologists, will return to this country sometime this month, and then will observe the operation of the Bayway plant and the results obtained.

No statement has been made as to the purpose to which the products obtained from this month of operation will be put.

"We do not make a rabbit pie," stated Mr. Clark, questioned on this point, "until we have caught the rabbit."

Cincinnati Stations Losing Money On Coupon Racket

By R. B. Stafford
N. P. N. STAFF WRITER

Cincinnati, Aug. 1.

CINCINNATI gasoline merchants are losing money on a coupon plan merchandising scheme, which amounts to a cut of 20 per cent, or more than 4 cents a gallon, on much of the motor fuel they sell.

So far as is known six gasoline dealers—all operators of just one station each—were drawn into the plan, which is being operated here by Kemper's Merchandising System of Louisville, Ky. One has already withdrawn; another has served notice it will withdraw and others are expected to follow similar action if they can withdraw. The racket was launched in Cincinnati only a few weeks ago.

The plan is this:

The Kemper system approaches a merchant with a proposition to increase the merchant's volume of business through the sale of coupon books, coupons from which are good for a variety of services or merchandise.

The merchant pays nothing for the coupons which are sold in thick books at $1.95 each direct to customers, at their homes, on the street, in cigar stores and so on.

The cost to the merchant comes in the giving away of valuable merchandise or service to purchasers of the books. The coupons cover all sorts of things from free shoe shines to airplane rides. Even some of the long established mercantile houses of Cincinnati, like the Peebles groceries, were sold the idea. The bait to the merchant is the increased volume of business that it is said will be drawn to his place through his participation in the coupon scheme.

The six gasoline dealers who have been sold the scheme are Dunn Bros., 3528 Warsaw street; Dayton Tire Co. of Cincinnati, 123 E. Central Parkway; J. H. Albers, Jr., & Co., 7439 Vine street; Orr Bros. Super-Service Station, 3569 Montgomery road; Juilfs Bros., 2680 Madison road, and Belvedere Garage Co., Reading and Paddock roads.

Dunn Bros. got a stipulation in their contract that their coupons should run for only 10,000 issues of the coupon book which is called a Thrift Book. Their coupons do not appear in books which bear numbers higher than 10,000. The other five dealers' names continue in the second 10,000. So far about 20,000 books are reported to have been sold. Selling is continuing by upwards of 150 peddlers. This week newsstands, cigar stores and others have taken on the sale, even merchandising them with window signs.

Sellers of the coupon books get 50 cents of the $1.95 the consumer pays. The printing is said to be 45 cents a book and the remaining $1 goes to the promoters of the scheme. It is the plan, according to the contracts with the merchants, to put out 50,000 books in Cincinnati.

Promotion of the scheme has already begun in Dayton, O., it is said in Cincinnati, and plans are under way to get started in Pittsburgh before long.

Here is the experience of the Belvedere garage with the coupon, reduced to dollars and cents:

This garage, before it contracted for the plan, was selling around 700 to 800 gallons of gasoline a day at 3 cents dealer margin.

July 18, when it was selling under the Kemper system, its gasoline gallonage went to 2400 gallons and it sold 40 gallons of oil. July 19 it sold 2500 gallons of gasoline and 32 gallons of oil. July 20 it sold 2300 gallons of gasoline and 18 gallons of oil. July 21 it sold 2100 gallons of gasoline and 15 gallons of oil.

Here is what was done July 21. Of the total sales of approximately 2100 gallons of gasoline, 1848 gallons was sold under the coupon plan of five gallons for cash and one gallon free. The garage took in 308 coupons, which meant it gave away 308 gallons of gasoline. It received cash for 1540 gallons sold to coupon holders. It sold about 250 gallons to non-coupon holders.

Reduced to figures its July 21 results on gasoline and oil business were as follows before allowing for rent, labor, light, power and other overhead:

Gasoline given away at 18c a gal. cost price	$55.44
Gross profit on 1540 gals. sold coupon holders	46.20
Loss on coupon gasoline business	$ 9.24
Gross profit on gasoline sold non-coupon holders	7.50
Loss on gasoline trade before overhead charges	$ 1.74
Profit on oil sold at 40 cents a gal.	6.00
Profit on gasoline and oil business before deduction of labor, rent, etc.	$ 4.26

Belvedere is one which

would like to rid itself of the system, it is said.

There are coupons for 50 free gallons of gasoline from each dealer in each book. Assuming that the five dealers continue through the whole program of 50,000 books and no more dealers are added in later editions, that would mean there were coupons for 250 gallons of free gasoline in each book. If all coupons are redeemed by the time the books expire next May 31, it means that 12,500,000 gallons of gasoline will be given away free by these five dealers.

Customers will have to buy five times this volume or 62,500,000 gallons, making a total tie-up of 75,000,000 gallons to these five stations. Add to this figure the sixth station involved in the first issue of 10,000 books—500,000 free gallons and 2,500,000 cash gallons. This brings the total up to 78,000,000 gallons tied to six dealers in the 10 months the plan has to operate.

Oil men who have investigated the scheme say this involves more gasoline than the expected consumption of Cincinnati motorists in that period.

Traffic through the stations has been too heavy, it is said, for the station to sell much oil. The Belvedere figures show oil sales to be far below the ratio of oil to gasoline that is normal in service station operation.

The super-service stations can sell little other goods, under the coupon scheme, it is said. One customer, asked if he wished to buy a tire, replied with the question, "Why should I buy from you when I have a coupon here which permits me to buy two tires for the price of one from the Dayton Tire Co.?"

That is true; the coupon book contains a Dayton Tire Co. coupon—a single coupon—good for one tire of any size free when one tire of the same size is bought for cash. That saving alone is worth considerably more than the price of the coupon book.

A super-service station cannot sell a car wash because one participant in the plans gives a free wash with one for cash. There is four hours' free parking by another participant to a buyer of four hours of parking privilege.

The plan is not without its humorous sides. A roadhouse offered a $2 dinner free with each $2 dinner sold. There was such a rush for $2 dinners that the house restricted the time for the free meal until after 9 p. m., contrary to the contract, it is said. After 9 its supply of food was exhausted.

The coupons do not comply with the Ohio statute governing the issuance of trading stamps, in that no cash value is placed on them. Whether any action may be taken to halt the scheme because of that cannot be learned, although the Cincinnati Better Business Bureau has the scheme under consideration.

Peddlers who are selling the coupon books are licensed under the city's indigent peddler's licensing ordinance. Under that ordinance a peddler claiming to have no money may get a 90-day license free. The licensing is under the direction of the Department of Public Welfare, which Aug. 1 announced no more licenses would be issued to peddlers of the coupon books. However, the cigar stores and other places where the coupons are sold do not require licenses because they have fixed places of business.

Copy of Dunn Bros. Contract with Kemper System

Established 1926

Kemper's Merchandising System
"The World's Greatest System of Producing Business"

Nationally Operated

LOUISVILLE, KY., May 12, 1930.

I, we, or either of us, the undersigned, hereby employ the Kemper's Merchandising System of Louisville, Ky., hereinafter referred to as Agency to print and publish an advertisement in the form of coupons for us in each Goodwill and Thrift Book, so many coupons to be issued on each item as listed below in said Thrift Books, to be issued and distributed by said agency in Cincinnati, Ohio, 50 coupons in each book, said coupons to read as follows, or the equivalent thereof: "Free, One Gallon of Gasoline with the Purchase of Five Gallons for Cash."

6-19-30

"Just run 10,000 books and wait before you run the balance. We will tell you as far as our name is concerned. E. S. K."

Void May 31st, 1931

It being understood and agreed that each of the coupons redeemed by me, us, or either of us, will be placed in a container and saved for said agency, subject to their order, so as to enable said agency to check all coupon numbers back against their records.

For and in consideration of the said printing and distribution of said coupon books, I, we, or either of us, promise and hereby become obligated and bound to honor said above-mentioned coupons as and when presented as and like cash and agree to handle the coupon business and the coupon customers in the same courteous manner and serve them in the same way and same place and time as cash customers where our merchandising service, or services, is being dispensed, sold or delivered for cash up to the void date of said coupons.

I, we, or either of us, agree to see that the owner of the coupon book has registered said Coupon Book with the agency before I, we, or either of us, honor said coupons; and where our merchandise is distributed by dealers to see that the coupon book has been properly registered with the said agency by the owner before any of the coupons are accepted for the merchandise and there is not to be over 50,000 books issued and distributed.

And as a further consideration of the said printing and distribution of said books, I, we, or either of us, hereby pay $(none) to said agency at the time of signing of this contract.

Natural Gasoline Markets Recovering From Early Season Slump

By J. C. Chatfield

N. P. N. STAFF WRITER

NATURAL gasoline markets in the Mid-Continent appear to be recovering from their recent slump. Indications are that this product will bring a larger percentage of the price of finished motor fuel during the late summer and fall months.

Output of natural gasoline is declining and the dumping done earlier in the summer now appears to be about over.

During the past month natural gasoline prices dropped fractionally below the lowest recorded open market quotations in the past decade. Grade AA reached 4 cents per gallon July 14 and some is understood to have been sold at 3.9 cents, almost as cheap as the posted price of Seminole crude at the well. Grade C was down to 3.75 cents a gallon, which was as low as this grade sold in the spring of 1927.

Natural gasoline markets as a rule are governed largely by the open market price of finished motor fuel as well as by the supply of the product itself available for sale to refiners. That is to say, the refinery selling price of finished motor fuel acts as an upward limit to the price for natural gasoline. Any advance beyond the deadline acts as a stop order on refinery buying and the price of naturals promptly drops.

While the natural gasoline market advanced a full cent the past two weeks since the pressure on it was removed, the price still is well below the level at which it can be sold without incurring excessive sales resistance on the part of the refiner.

The recent break is one of the most peculiar in the history of the industry. Previous slumps invariably have been caused by the increase of production at a faster rate than the increase in motor fuel consumption. This time the break came at a time when natural gasoline production was on the decline and stocks were in no sense burdensome.

At the end of May total natural gasoline stocks in the hands of manufacturers were 920,400 barrels. This was 33.81 per cent below the stock of 1,390,-452 barrels on hand May 31, 1929. In June stocks increased only 8000 barrels.

Daily average production of natural gasoline the first six months of this year was 146,200 barrels as compared with 148,-800 barrels the last six months of 1929. Output in the first half of 1930 was only 6.3 per cent greater than the first half of 1929, while the consumption of motor fuels increased approximately 8 per cent.

Therefore, the statistical position of natural gasoline was sound at the time of the break in prices.

Another queer feature of the market debacle was that the sudden dumping of natural gasoline came from the hands of one of the major companies. Normally it is the little fellow who unloads in a panic and forces prices down. This time it was one of the biggest.

As a usual thing the Carter Oil Co., subsidiary of the Standard Oil Co. of New Jersey sells its natural gasoline largely to affiliated companies, such as the Standard of Louisiana, Humble Oil & Refining Co. and the New Jersey company itself. But at the opening of the heavy consuming season this year, Carter began offering large quantities of natural gasoline in the open market.

Some of the larger manufacturers took fairly large quantities when these offerings first began to appear. But the offers continued to a point where these companies had to stop buying. So the market sagged rapidly from that time onward, while selling by Carter continued.

It is understood Carter sold approximately 1200 tank cars of natural gasoline the past two months. As to the future it is generally understood that one company has contracted for 200 cars per month of Carter gasoline over the remainder of the year and another has taken 125 cars per month for August and September delivery. It is believed generally that the Carter will not be a market factor during the remainder of the year.

In many respects the natural gasoline market is the most responsive in the petroleum industry. When refiners want naturals they buy freely and in large quantities but when they have no immediate need for blending stock they will not take it in at any price. Neither manufacturer nor refiner wants to store naturals in any large quantity at any time. As a result even 300 or 400 cars of unexpected and unwanted natural gasoline thrown on the market causes distress and falling prices.

Two theories exist in natural gasoline marketing circles in the Mid-Continent as to why Carter should unexpectedly dump 1200 cars of gasoline into the open market.

One theory is that the New Jersey company found itself long on natural gasolines at its refineries because of low export demand and a greater production of light fractions such as butane due to more efficient recovery of still gases. It is said the company was not thoroughly conversant with natural gasoline marketing technique and threw the gasoline on the market in large quantities without

realizing the havoc it would create.

Another theory is that the action was taken to discourage the growing activity of natural gasoline manufacturers in foreign markets. In recent years some of the larger factors in the market have been seeking to develop an outlet in Europe for stabilized natural gasoline so that the buyer there could supply his own volatility to any gasoline he bought. It is said that at least one large company in this country which has an extensive European business refused to renew a contract some time ago with a manufacturer here who was seeking to develop an export trade.

If the theory is correct that the selling was done to discourage export activity, it is evident that the move was not successful. On the contrary it had the opposite effect. In the first place natural gasolines dropped so low that small refiners were able to buy and blend up gasoline to export specifications for sale through brokers at less than Export Association postings.

Again the price of natural gasoline was driven so low that those interested in the export business could buy naturals in the open market and stabilize the straight refinery material bought for tanker shipment at prices attractive to overseas buyers. One of the manufacturers with a stabilizing plant at the Gulf bought some of the Carter gasoline.

It is said that one of the New Jersey companies is now in the market for natural gasoline to supply its refineries and is unable to find goods at a flat price but must pay on a market-date-of-shipment basis — a much higher price than its sister company sold at such a short time ago.

The present outlook for better natural gasoline markets in August and the early fall months comes largely as a result of more stringent crude proration in flush fields and secondarily from the natural weather losses which the industry cannot escape in such hot weather as has been experienced.

A brief survey of the Oklahoma City situation indicates there will be a material reduction in output there in August. It is estimated by several manufacturers with plants in the field that the output of the district will not go much over 25 per cent of that obtained in June. Several plants not connected to a large number of wells are now shut down a large part of the time. The sales department of one company woke up the other day to the fact that it had sold more gasoline for delivery out of the field in August than its plants probably will produce.

The difficulty at Oklahoma City lies in the small percentage of the potential which wells are allowed to produce and the intermittent character of production since each well is allowed to produce only one day out of 12. Recently one plant was put on stream for a single hour to extract gasoline from gas which would be produced only during that period.

In the greater Seminole district natural gasoline production now is 20 per cent less than last winter and operators are expecting still less in August.

The present outlook for all flush fields of the country is for more stringent proration and hence less gas to be handled by the natural gasoline plants. And it is from the flush fields that a large part of the natural gasoline comes.

The only new flush fields now on the horizon, which are expected to add large quantities of natural gasoline to the market supply are Hobbs, New Mexico, and Kettleman Hills, both of which are to be developed under proration.

While Oklahoma City could produce a half million gallons of natural gasoline per day if the field were opened there seems to be no possibility that this will happen. Seminole production seems definitely on a decline, the Panhandle of Texas appears to have reached a peak.

In the Hobbs field operators will be troubled with a high hydrogen sulfide content. The gas contains about 1200 grains per hundred cubic feet, which will require special equipment. Phillips Petroleum Co. is building a fifty million cubic foot plant in the field and Continental Oil Co. and Shell Petroleum Corp. will build a joint plant.

The Hobbs gas tests 1.5 gallons of gasoline per thousand cubic feet at atmosphere pressure but under a 15-pound trap pressure the yield is cut to about 0.6 gallon. The average yield in the field probably will approximate 0.7 to 0.75 gallon per thousand under operating conditions.

Present indications are that natural gasoline production for the entire year will not exceed that of 1929. While there was an increase of 6.3 per cent in the first six months over the first half of last year, the last half output is expected to be well below that of the last six months of 1929.

Advertising Film Goes «Talkie»

NEW YORK.—The old fashioned slide advertisement so common in the old motion picture houses is being endowed with new dignity to help industry sell its products to the public. And it has gone "talkie."

Talking pictures are being used in sales education work of The Texas Co., which is utilizing them as a medium for carrying forward its work among the personnel of its own organization. The idea was developed for the quick coaching of the sales organization in the introduction of Texaco Ethyl gasoline. The pictures have been taken and projected by the Stanaphone process, owned by the Stanley Film Advertising Corp., of New York.

Appearing in the Texaco talking pictures are W. S. S. Rodgers, vice president in charge of domestic sales; Fred T. Manley, vice president in charge of the refining department; H. W. Dodge, general sales manager; George W. Vos, superintendent of advertising division; William Harrigan, technical division of refining department; Capt. A. A. Nicholson, superintendent of educational division; Leonard O'Malley of the educational division and H. W. Holland of the general sales manager's office.

THE OIL JOBBER--

Who was - - 5 Years ago
Who is - - - - - - -Today
Who will be- - Tomorrow

The third of a series of discussions of trends and conditions by L. V. NICHOLAS

IN THE days before the "service station," tank wagon margins of profit were wide and the fight for business was just as keen as it is today. But—the prize was a nice, fat, juicy garage account on which the "wholesale" profit was of "retail" proportions, and to which the garage added another profit.

Pressure—economic or otherwise—creates necessity and necessity is the mother of invention.

A smart oil jobber **"invented"** the service station because he could not get the prize garage accounts away from his more established competitors;—they were too strongly held and too vigorously defended.

To the "invention" of the service station, this smart jobber added the finishing touch that made it an immediate and great success—**he cut the price and sold retail to the public at what had always been the time-honored wholesale price.**

In other words, the "jobber" became the "retailer" and cut out the middleman's profit and reduced his price to the public by that amount.

The day the service station was "invented" and the retail price was cut to the wholesale figure, time honored marketing practices crumbled and were brushed aside in spite of the fact that at the beginning the service station operator was considered an outlaw and a demoralizer with little if any more social standing than the so-called bootlegger has in petroleum marketing circles today.

The above ancient oil history is mentioned solely for the sake of assisting us to realize how short a time it takes for an outlaw or a revolutionary merchandising practice to become well established and respectable if it has a sound economic foundation.

Successful retailing methods are basically the same the world over and have been from the beginning of time. **To succeed in retailing, you must have what the public want when and as they want it.**

The retailer's problem is to **meet** demand and even where, by advertising or otherwise, the retailer **creates** demand, he still has the problem of meeting the demand created or he has failed as a retailer.

Never again, in the history of the Oil Industry, is there likely to be opportunity for the "invention" of such a marketing device as the service station and to combine with it a legitimate reduction in price of such startling proportions as to give it immediate public acceptance.

But—retail merchandising is a legitimate business and pays big rewards to those of genius and ability who develop ways and means to combine an old service in a new way better adapted to public demands.

Ask yourself this question and think it over until next week: **"What can I do to combine present serv-**

FOLLOWING this article will be found letters which have been sent to NATIONAL PETROLEUM NEWS commenting on earlier articles in this series on the oil jobber of tomorrow.

NATIONAL PETROLEUM NEWS repeats what was said in the introduction to the first article. It is presenting Mr. Nicholas' views for the purpose of stimulating discussion on a merchandising problem involving the future of the independent oil marketer.

Insofar as its space allows, it will be glad to publish letters from readers commenting on these articles. Mr. Nicholas, later, will answer some of the points brought up by readers in their letters.

ice in a new way that will reduce overhead and permit me to give the public a greater service for the same price or the same service for a less price?" (Keeping in mind that simply cutting price without proper economic justification is a short cut to the poor-house).

This week I received a letter saying that "even though cut price bootleg gasoline distributors do not sell nationally known trademarked brands of gasoline, they do have many well known national brands of lubricating oil and display their signs in a very conspicuous way which gives their cut price gasoline at least an inferential endorsement and their marketing methods a cloak of respectability."

As I understand this series of articles I have been asked to write, I am not called on to attack or defend the price structure or marketing methods of the Oil Industry—either individually or collectively—and for that reason I would not care to be put in the position as classifying what we term the gasoline "bootlegger" as respectable or otherwise.

We are looking for the solution of a merchandising problem which involves the future of the independent oil marketer taking into consideration the wide spread of integrated companies who are marketing their products direct and coming into direct competition with the oil jobber.

That answer can, in my judgment, only be developed by studying the past and attempting to determine where present trends will lead.

Frankly, I question whether well known national brands of lubricating oil without companion brands of gasoline of equal quality and standing have any permanent place in the picture.

The best advertised and most outstanding brand of lubricating oil was recently forced to consolidate with another outstanding company in order to secure a gasoline background because it could not stand alone.

I am firmly convinced the brands referred to as lending "respectability" to bootleg gasoline station operations will not add one-quarter as much to the standing of the gasoline as they themselves will lose in public esteem as a result of the company they keep.

(Third of a series)

T. O. Nicholas

Letters from Readers on Nicholas Articles

Dear Editor:

I was very much surprised to read L. V. Nicholas's article in the July 23rd issue of the National Petroleum News.

Evidently, Mr. Nicholas has changed his methods of livelihood and became imbued with "shock troop" merchandising ideas. In other words, it would seem that we are supposed to surrender to nationally advertised products, losing our individuality and thereby our initiative and any aggressive mental capacity we may have.

I would be interested to have Mr. Nicholas explain why some of the larger companies have brought out jobbers. They are not philanthropists, I am sure, and consequently, any investment they have made in individual jobbing concerns, would have to be profitable. It would seem that the jobbing business, properly operated, will show a satisfactory return on an investment.

Mr. Nicholas goes on to state or infer that the independent jobber is a seller of inferior gasoline. Enclosed you will find a report by E. W. Saybolt & Co. listing ten different products; one to five inclusive, represents nationally advertised gasoline, and six to ten, local independent gasoline. The samples were taken from pumps at various service stations. Upon careful inspection of the various tests made, it would indicate quite clearly the independent companies are selling as good a product as the major companies.

You will note the initial boiling points are approximately the same, and the end point on the independent gasoline is on an average of ten degrees lower than the nationally advertised gasoline. I had absolutely nothing to do with the taking or the testing of the samples, which was done by a dis-interested party and was done to appease my own curiosity as well as to contradict the statement of Mr. Nicholas.

His comments on service in local communities to the effect that stations selling nationally advertised products render better service than the local man, is absurd. This condition may exist with a few of the drones in the independent ranks, but not to any greater extent than the poor service rendered by low paid attendants at nationally advertised stations, whose incentive is limited to having a job and receiving a pay envelop at the end of the week. Individuality will always be outstanding.

The successful jobber today, marketing his own brand, is only successful by reason of his aggressiveness, being known to the community, known to be reliable and to be abreast of the times with quality, price and service.

True, some of the large individual jobbers have been purchased by nationally advertised companies, but Mr. Nicholas neglected to take into consid-

Analysis of Quality of Gasoline at 10 Newark, N. J. Stations

Made by E. W. Saybolt & Co., New York for Frank E. Hart, Hartol Products Corp., New York

	Nationally Advertised Gasoline					Local Independent Gasoline				
Sample No.	1	2	3	4	5	6	7	8	9	10
Gravity, A.P.I.	57.5	53.5	58.8	59.1	59.6	56.9	57.5	56.1	54.9	60.2
Color Saybolt	O.G.	Blue	+16	+11	+23	+15	+23	+22	+14	+28
Sulphur	.059	.063	.065	.043	.072	.054	.066	.070	.070	.090
Odor	Sweet	Sweet	Sweet	Sweet	Sweet	Sweet	Sweet	Sweet	Sour	Sweet
I. B. P. °F.	100	103	105	101	104	104	98	106	105	101
F. B. P. °F.	410	422	418	392	391	385	390	402	406	400
Recovery %	98	98	97.5	97.5	97.5	98	97.5	98	98	97.5
Residue %	1.0	1.0	1.5	1.5	1.5	1.0	1.5	1.0	1.0	1.5
Loss %	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
5% off at	136	139	142	146	133	138	138	140	150	118
10% off at	155	161	162	164	150	158	162	162	161	148
20% off at	188	198	192	199	184	194	194	196	202	188
30% off at	217	224	220	228	212	227	224	233	234	225
40% off at	240	255	243	254	238	248	248	258	259	250
50% off at	263	281	266	274	261	270	272	280	280	278
60% off at	284	301	286	297	280	288	291	302	302	300
70% off at	308	329	312	313	300	308	310	321	324	317
80% off at	334	354	338	337	324	330	330	345	348	338
90% off at	368	386	370	361	350	356	356	374	374	365
95% off at	396	407	396	382	374	372	380	392	395	385
221° F. % over	33	28	32.5	27.5	33	29	29	27	26.5	28
284° F. % over	60	52	59	54	62	56.5	56	52	51.5	53
392° F. % over	94.5	92	94.5	96	x	x	x	95	94.5	96.5

eration the number of small jobbers that have taken their places.

The jobber today is more interested in a quality source of supply than he was several years ago. The good ones are paying premiums for quality gasoline and sacrificing from one quarter to as high as a cent and a half a gallon in order to give their customers the best. In every instance, to my knowledge, where an independent jobber merchandising his own brand has sold his business to a nationally advertised company, there has been an immediate and substantial loss in gallonage.

I am heartily in accord with Mr. Nicholas's view that the jobber is changing. The drone, the man that believes he is entitled to a certain amount of business just because he is in business, is unquestionably going out. But the jobber that is cognizant of conditions, not only in the oil industry but general competitive conditions, is on the alert endeavoring to combat these competitive conditions with aggressiveness.

There is absolutely no monopoly on aggressiveness and brains, and consequently, sound business men are going to prosper in the oil jobbing business more so today than they have in the past. Probably a different yard stick of measurement will be used, but the final results will be found in the balance sheet.

F. C. Hartz,
President, Hartol Products Corp., New York.

Dear Sir:

Being an Independent oil dealer and handling a nationally known brand of gasoline and oil, I am very much interested in the series of articles which are being published by you, written by Mr. L. V. Nicholas.

I note with interest his reference to the cut price bootleg gasoline distributors. We have a number of them in this section and I notice that they practically all handle national brands of oil, such as Mobil, Quaker State and Pennzoil, and post their signs in a very conspicuous place and have plenty of them. These nationally known signs give the gasoline bootlegger sort of a cloak of respectability.

What will be the final answer to this question? Will these national brands be sold entirely through bootleg stations, or will legitimate stations and the bootleggers both continue to handle these brands? Perhaps Mr. Nicholas can answer this. It is of considerable interest to the Independent jobber, and I am sure that all of them will read, with keen interest, these series of articles.

Yours very truly,
G. E. WILSON,
FRANKLIN OIL CO.,
Saginaw, Mich.

Judge Beaty's Wife Killed in France

By Telegraph

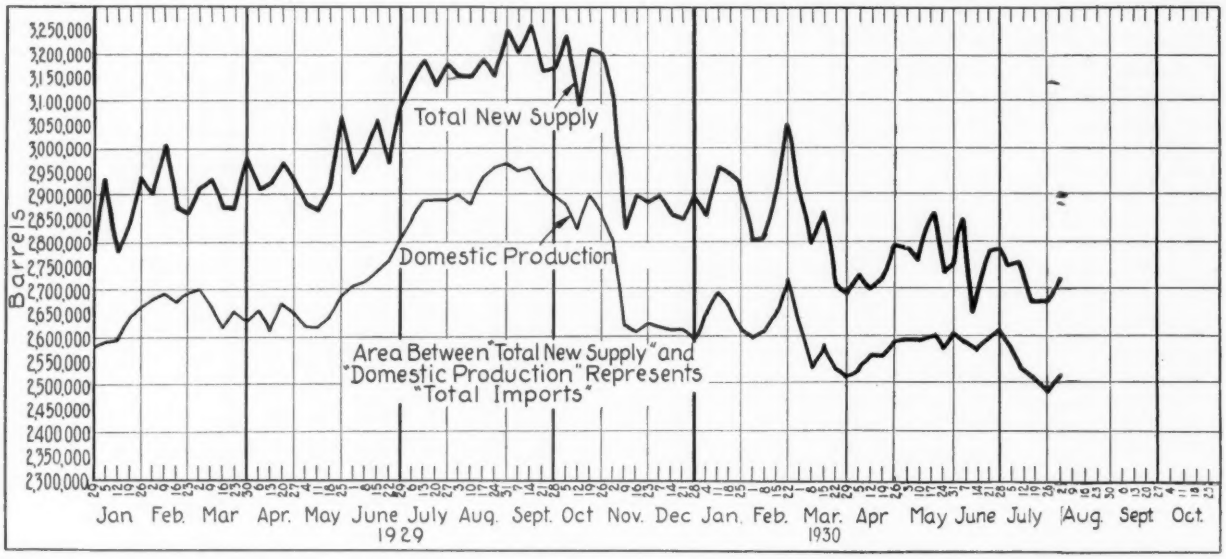
NEW YORK, August 5.—Judge Amos L. Beaty of New York was slightly injured and his wife instantly killed when the automobile in which they were riding near Bordeaux, France, August 1, collided with a truck. They were making an automobile tour of southern France.

According to his New York office, Judge Beaty will leave France with his wife's body August 6, sailing on the steamship "Paris" from Cherbourg. The "Paris" is expected to arrive in New York August 12. Interment will be made in New York.

Davis Welding Picnics

CLEVELAND, Aug. 5.—The ninth annual outing of the Davis Welding & Mfg. Co. was held Aug. 2nd at Laughery Club, in Indiana. The company chartered a boat and took 260 men 35 miles down the Ohio River to the club. Plant No. 2 carried off athletic honors. Joseph Keller was chairman of the picnic committee. Among the guests were Edward Bengert, vice president, Cincinnati Oil Works; R. T. Ford, sales manager, Halstead Oil Co.; Fred Long, Trailmobile Co.; H. J. McAdams, NATIONAL PETROLEUM NEWS.

Review of Late Production News


Barrels
Total New Supply
Domestic Production
Area Between "Total New Supply" and "Domestic Production" Represents "Total Imports"
Jan Feb Mar Apr May June July Aug Sept Oct Nov Dec Jan Feb Mar Apr May June July Aug Sept Oct
1929
1930

Daily Average Crude Oil Production and Imports Based on Current Reports of American Petroleum Institute

U. S. crude production increased 26,600 barrels daily average in the week ended Aug. 2. East of the Rocky Mountains the increase was 30,800 barrels due largely to new wells at Oklahoma City and the collapse of proration in Darst Creek.

Darst Creek field output increased 46,300 barrels daily average. In spite of an increase of 22,950 barrels at Oklahoma City, the level of production in Oklahoma was cut 12,200 barrels daily average.

Texas, New Mexico, Louisiana

LEA county, New Mexico, including the prorated Hobbs district, is now producing 38,420 barrels of the 334,950 barrels yield of the Permian salt basin geological province.

In East Texas, where Van Zandt county unified development continues, it is now proposed to keep daily average production indefinitely at the recent 25,000-barrel level.

East of Texarkana, in Sec. 23-15-26, Miller county, Arkansas, Lenz and others, found a new producing area at 2847 feet. At two feet in pay, the hole filled with oil to within 100 feet of the top. As it stands the well is estimated good for 20 to 25 barrels daily. Pay is believed to be in the upper Trinity horizon. It is believed further work on the well will bring larger production.

Current production in this country by pools is found on page 89.

Oklahoma, Kansas

DRILLING seems to be slowing down in the Mid-Continent at last. The current crop of new locations is small. There were a few interesting wildcats last week though some of them owe their distinction to being dry. The West Asher pool of Payne county, Okla., lost some of its importance when water began figuring in the initials of the new wells.

In Kansas, the most interesting spot was in the Eastborough pool near the city of Wichita. It now has seven 1000-barrel producers, and a fairly active drilling campaign is getting under way.

Further evidence of a new pool in Moore county of the Texas Panhandle was found in a new wildcat.

California

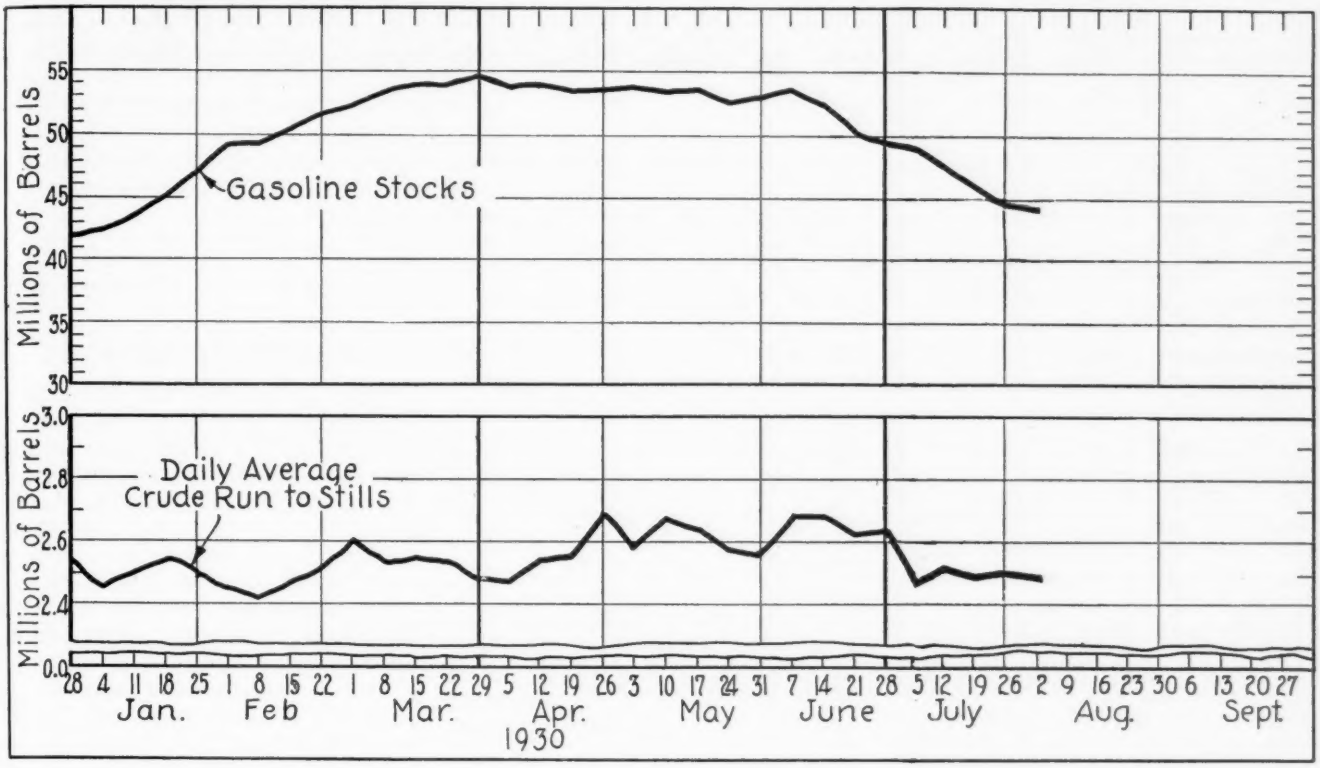
PRODUCTION news on the west coast during the week was confined to further exploitation of proven sands in the Los Angeles Basin, and Coastal fields. Elwood and Playa del Rey fields added 6000 barrels of flush oil to the state's output. At least three tests are reported under way to determine productiveness of deeper zones in proven fields.

Two extension wells are preparing for flow tests in the Playa del Rey pool. If successful they will give the structure a long axis of nearly two miles.

Wyoming, Montana

DISCOVERY has been made of a showing thirty feet in the second Wall Creek sand in the Midwest Refining Co.'s test on the Midway Dome structure twelve miles north of Casper. The well is bottomed at 5187 feet and is reported to have 10 feet of gas sand and 20 feet of oil, with no water. A string of casing is being run and will be cemented before an accurate test can be made.

U. S. Crude Runs and Gasoline Stocks as Reported Weekly by A. P. I.



Refiners Reduce Crude Runs 61,900 Barrels

By Telegraph

NEW YORK, Aug. 5

CRUDE runs to stills of U. S. refiners were reduced 61,900 barrels daily average to 2,456,700 barrels per day in the week ended Aug. 2 according to reports gathered by the American Petroleum Institute. Refiners utilized 69.6 per cent of their still capacity as compared with 71.4 per cent the previous week.

Gasoline stocks were reduced 651,000 barrels during the week to 44,100,000 barrels. Texas and Appalachian refinery districts showed increases in stocks but all others reported reductions. Texas gasoline stocks were increased 261,000 barrels.

The stock reduction was less than in previous weeks in spite of the smaller rate of throughput indicating that gasoline demand was somewhat lower in the last week in July.

Fuel oil stocks were increased 572,000 barrels during the week to 139,641,000 barrels. Refiners reduced fuel oil stocks in the Appalachian, Indiana-Illinois and Texas groups.

Current Refinery Operations

Districts	Per Cent Capacity Reporting	Daily Average Crude to Stills (Barrels) Week Ended		Per Cent of Reporting Capacity Operated Week Ended		Stocks (Thousands of Barrels)			
		Aug. 2	July 26	Aug. 2	July 26	Gasoline Aug. 2	Gasoline July 26	Gas & Fuel Oil Aug. 2	Gas & Fuel Oil July 26
East Coast	100.0	488,100	488,700	80.2	80.3	7,242	7,354	10,084	9,757
Appalachian	91.8	81,000	77,800	68.9	66.2	1,494	1,467	1,010	1,042
Ind., Ill., Ky	99.6	285,400	295,900	74.9	77.7	7,069	7,363	4,387	4,403
Okla., Kans., Mo	89.9	261,600	281,600	62.9	67.7	3,671	3,837	4,730	4,671
Texas	90.4	561,600	582,600	7.88	81.7	6,737	6,476	10,141	10,182
La., Ark	96.8	157,900	164,900	60.3	62.9	1,741	1,977	1,938	1,927
Rocky Mountain	93.6	52,100	54,800	37.4	39.4	2,400	2,481	1,204	1,204
California	99.3	569,000	572,300	63.8	64.2	13,746	13,796	106,147	106,083
Total	95.7	2,456,700	2,518,600	69.6	71.4	44,100	44,751	139,641	139,269
Texas (Gulf Coast)	100.0	418,000	429,900	79.4	81.7	5,484	5,253	7,049	7,155
La. (Gulf Coast)	100.0	112,400	106,100	76.2	71.9	1,382	1,589	1,098	1,068

England Seeks New Foothold In Iraq, Rich in Oil

NEW YORK, July 31

ENGLAND seeks a new foothold in the valuable Iraq oil territory in the Near East. Its ends may be advanced at a meeting of Mesopotamian statesmen in London the next few weeks with British authorities. King Feisal, of Iraq, is to attend.

The English and American groups in the Iraq Petroleum Co., which was organized as an international oil company after the war to hold concessions and develop oil properties in the Iraq, have been in favor of withholding development until there was need for crude supplies from this territory. The French group alone has been anxious to hasten the development of the Iraq fields.

The Iraq government would like to see the country's oil resources opened since the concession held by the Iraq Petroleum Co. provides for payment of substantial royalties and the present ministry is said to be in favor of terminating the Iraq Petroleum Co.'s rights and admitting competing groups.

The principal of these groups is a syndicate, known as the British Oil Development Co., headed by the Admiral of the Fleet, Lord Wester Wemyss. Its members include leading British industrialists and financiers, including Lord Inverforth, the shipowner, and Sir Edward Manville, chairman of the first European enterprise to engage in cotton growing and irrigation in Mesopotamia.

Realizing that, as a purely British group, the British Oil Development Co. could not get very far with the League of Nations in securing concessions in Iraq, which was set up as a kingdom after the war, under the wing of the league, the British interests invited in an Italian group and these two then invited in a German group made up of leading industrialists.

To render the new applicant for a petroleum concession in Iraq more representative of European interests, it is understood a Swiss-French group is to be admitted. Control of the British Oil Development Co. is to be 76 per cent with the British and Italian groups, and 24 per cent jointly with the German and Swiss-French group.

The British Oil Development Co. takes in, it will be seen, the principal European industrial companies excluded from the Iraq Petroleum Co. It aims at a similar concession to that granted the Iraq company. This provides for a reasonable period for exploratory development, then the selection of 24 plots, of 8 square miles each for company development. Thereafter the company is to participate as a manager for the Iraq government in the throwing open to public tender of remaining oil lands.

In the British Oil Development Co. the Italians see an opportunity to become less dependent on the Russian soviet for oil supplies. The Germans are principally interested in supplying equipment and machinery. The French, though already interested in the earlier Iraq Petroleum Co., look to the new group to break down the policy of the former group to withhold development until the world needed additional crude supplies.

Participation by oil companies in the United States in the Iraq Petroleum Co. came about only after considerable protest after England's plans became known in regard to the development of the rich oil resources in the newly formed kingdom, under the protection of the League of Nations.

Prior to the war the Germans held valuable development rights in this territory. After the war England proposed to develop these through the Iraq Petroleum Co., controlled by the Royal Dutch-Shell and Anglo-Persian interests.

Both France and the United States protested the moving in in this fashion by the British and there was redistribution of interest in the Iraq Petroleum Co. The Royal Dutch Shell group and the Anglo-Persian Oil Co. group each hold 24 per cent of its $15,000,000 capital stock, a French group and a group made up of oil companies in the United States each 24 per cent.

Program for Production Engineering Meeting

DALLAS, Aug. 1.—How gas separators affect conservation of gasoline vapors and oil in storage and how to prevent blowouts in drilling will be discussed at the fall meeting of the southwestern district of the American Petroleum Institute division of production, Buccaneer Hotel, Galveston, Sept. 4 and 5.

Other discussions will concern practice and oil field equipment. These speakers will read the following papers:

W. C. Shutts, Humble Oil & Refining Co., Houston, "Results of Survey of Oil Field Equipment for Conformance to A. P. I. Specifications."

W. H. Meier, Atlantic Oil Producing Co., Dallas, "The Advantages of Insulation of Oil Field Boilers."

W. T. Doherty and M. Manning, Humble Oil & Refining Co., Houston, "Further Development of Cementing Practice in the Gulf Coast Area."

Harvey Hardison, The California Co., Midland, Texas., "Results Obtained in Yates Field by Tubing Flowing Wells."

W. W. Scott, chairman, drilling practice committee, "Report of Committee on Designation of Flow Bean Sizes."

A group paper, "Equipment and Methods for Preventing Blowouts in Drilling," by the southwestern district committee on drilling practice will be read by C. W. Alcorn, chairman.

Speakers are to be selected to talk on the "Proper Installation of Gas Separators to Obtain Maximum Efficient Separation of Oil and Gas" and for "Description of Deep Well Drilling in the Big Lake Oil Field."

Three Receivership Suits Filed Against Superior Oil Corp.

TULSA, Aug. 1

JOHN ROGERS, Tulsa attorney, was appointed receiver for the Superior Oil Corp. July 30 by district Judge Owen Owen, of Tulsa county.

Petition for receiver had been filed by the Exchange National Bank, Tulsa. John Rogers, brother of Harry H. Rogers, president of the Exchange National, assumed charge of the company the following day.

Court action to determine the jurisdiction of federal and state courts is in immediate prospect. On the same day the Tulsa bank went into the state court, William Moody 3rd, of Houston, filed a receivership bill in the federal court at Wilmington, Del. His allegation was that he would be held responsible for debts of the company if the company itself did not pay them.

Mr. Moody and O. R. Seagraves also asked for a receivership for the Moody Corp., at Houston. This company is a subsidiary of Superior which was sold by the Moody-Seagraves interests in March, 1929. The court appointed Col. Thomas H. Ball and Judge Lewis Fisher receivers.

On the following day E. Stewart Matlock, of New Castle, Ind., a minority stockholder, filed suit in the federal court at Tulsa asking that a receiver be appointed and that John Rogers be restrained from exercising any authority over the company's affairs. He charged collusion between the Exchange National Bank and the management of the Superior in getting the state court to appoint a receiver.

The bank alleged in its petition that it had loaned Naphen & Co., of New York, said to control the Superior, $250,000 and had taken as collateral security a promissory note for $500,000 given by the Superior to Naphen & Co. The note was due July 30. The bank said it had called for its money and the payment had been refused.

Matlock, who says he owns 100 shares of Superior, named as defendants the Superior Oil Corp., Superior Oil Producing Co., Old Dominion Transportation Co., Moody Corp., Naphen & Co., George Naphen, E. .R. Perry, H. G. Davies, Grover C. Harned, the Exchange National Bank, the Exchange National Co. and John Rogers. Mr. Perry is chairman of the board of the Superior. He was for several years vice-president and general manager of Cosdon & Co., now the Mid-Continent Petroleum Corp. Mr. Davies is president of Superior and Mr. Harned is treasurer.

Matlock, who is the son-in-law of Arthur B. Ayres, former head of the Union Oil & Gas Co., whose large holdings in Kentucky were sold to the Swiss Oil Corp. several years ago, alleged that Naphen & Co. controlled the policies of the Superior. He said that the company owes large sums and is without the money to pay them.

He charged Naphen & Co. with dominating the company to its detriment and to the individual enrichment of Naphen & Co. He said that the company had not paid dividends since Naphen & Co. came into it. He said that Naphen put E. R. Perry in as chairman of the board at a salary of $50,000 per year; that H. G. Davies' salary was raised from $15,000 to $25,000 per year; that Grover C. Harned gets $12,000 per year as treasurer.

It was charged that D. T. Ingling gets $12,000, although he is in fact the private secretary to George Naphen and performs no services for the Superior except to act as a director.

The Superior started in Kentucky where it developed substantial production. Several years ago the offices were moved from Lexington to Tulsa. It has production in Oklahoma and Texas, said to be around 8000 barrels daily.

Wildcat Near Texarkana Is 300-Barrel Well

By Telegraph

HOUSTON, Aug. 3

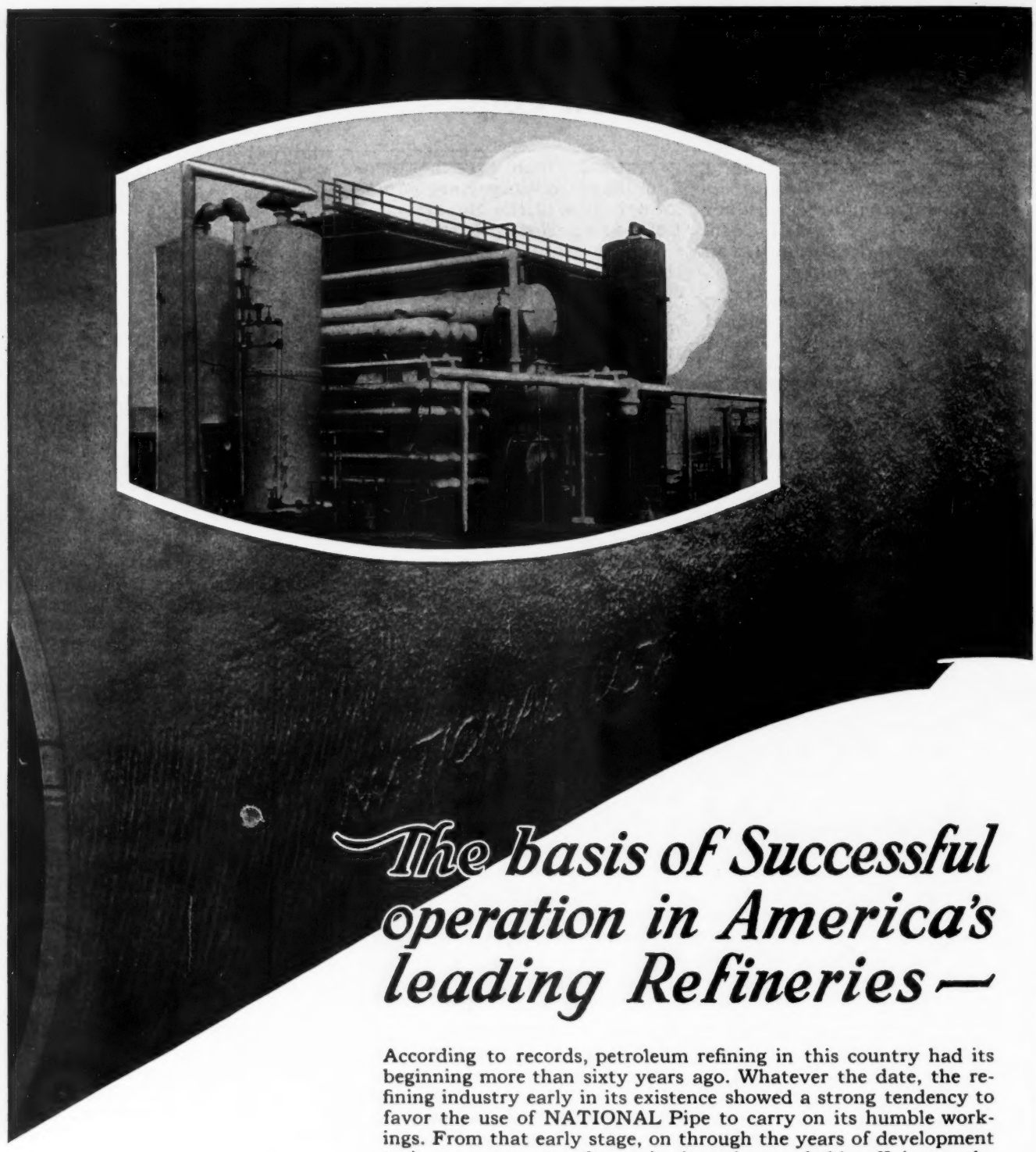
AFTER five years of prospecting and the drilling of nine test holes in the region east of Texarkana, oil has been discovered by Charles V. Lenz and his associates on the G. W. Johnson farm in Sec. 23-15-26, Miller County, Arkansas.

Originally good for 20 to 25 barrels daily at two feet in pay topped at 2845 feet, the Lenz well was estimated good for 300 to 400 barrels daily at the end of the week. Oil approximates 30 gravity and is said to contain approximately 14 per cent gasoline.

Besides the 320-acre Johnson farm where the discovery was drilled Lenz and associates control about 14,000 acres in the vicinity. In the general territory from three to twenty miles away, further tests are to be made on acreage held by "Bill" Rowe, Shreveport operator, the Arkansas Natural Gas Corporation, and others.

The indicated new field is 18 miles east of Texarkana and three miles south of the cotton belt railroad in Miller County. It is also within 12 miles of the Standard Pipe Line Co. trunk system connecting with the Oklahoma Pipe Line Co. facilities from Oklahoma to Baton Rouge.

In the Zwolle field of Sabine parish, Louisiana, the third "gusher" well of the last ten days has been completed. It was the swine state bank number owned by the Shreveport-Eldorado Pipe Line Co. and A. H. Tarver, estimated good for 7000 barrels daily at 2426 feet. The earlier "gushers" were Loring Oil Co.'s previously reported No. 1 Gard in Sec. 20-7-12, good for 7000 barrels, and its No. 11 Bowman-Hicks in Sec. 34-8-12, good for similar flow.



The basis of Successful operation in America's leading Refineries—

According to records, petroleum refining in this country had its beginning more than sixty years ago. Whatever the date, the refining industry early in its existence showed a strong tendency to favor the use of NATIONAL Pipe to carry on its humble workings. From that early stage, on through the years of development to its present state of magnitude and remarkable efficiency, the industry has continued to place its stamp of approval on the merits of NATIONAL Pipe—approval that has made its use so generous and country-wide as to earn for this product the position of leadership in quality—the recognized basis of successful operation in America's leading refineries.

NATIONAL TUBE COMPANY, Pittsburgh, Pa.
Subsidiary of United States Steel Corporation

NATIONAL PIPE

An Open Letter

Mr. E. G. Seubert, President,
Standard Oil Co. of Indiana,
Chicago, Ill.
Dear Mr. Seubert:

Now that you are in the pipe line business in a large way, through your purchase of the Sinclair's half interest which gives you, if my arithmetic is correct, 100 per cent ownership in the line, it is timely that a lot of people rush forward to give you advice on how to be a pipeliner.

Understand, please, Mr. Seubert, that my suggestions are not made in a spirit of criticism of the management of the Sinclair Pipe Line Co. as it has existed. On the contrary, I consider Messrs. Manion, Blake, Sibole and all the personnel of the company quite expert at their jobs. One of the qualifications of a pipeliner is that he refrain from talking about the way he runs his job. These gentlemen are quite sparing of words.

Neither is this letter intended to mean that you will not know what to do with the line, now that you have bought it. As a microscopic stockholder in your company I am, of course, at liberty to give advice but I have refrained from interfering, although I have long thought it would be a lot of fun to attend the annual meeting and heckle the management just to see how rough the party would become.

The reason for taking pen and ink in hand at this time is to suggest a way in which us stockholders can benefit from a part of the pipeline. It stands to reason that you will prosper also and if my plan is carried out I shall vote to give you a salary increase, which I understand you have not had since you became president, although it has been more than a year and it is customary to raise salaries at the beginning of the year where work has been satisfactory.

You have, or rather I should say, we have a long stretch of pipeline from Wyoming to near Kansas City. Now that line has not been running any oil since the production fell off at Salt Creek. There is no reason to assume that it will be needed for oil very soon.

Here is my plan for commercial utilization of this line: Wyoming is full of jackrabbits. There is a big demand for these animals in centers of population, such as Kansas City, Chicago, St. Louis and elsewhere. They appear in those towns on menus as chicken salad, veal pie and are an important ingredient in goose liver sausage in the proportion of one rabbit to one liver. Owing to high freight rates, it is difficult to supply the market with all the rabbits it will take.

This pipe line, being 10 and 12-inch, is large enough to accommodate a half grown jack, moving under his own power. The line is well oiled inside and frictional resistance would be small. Let us, therefore, arrange to enter the rabbit transportation business in a big way. Knowing my Wyoming rabbits, I have figured that a jack can make it from the western end of the pipeline, where it crosses the scarp, to Kansas City in about three days. Let us say four days, allowing time to bypass them into the tanks at the pump stations and feed them.

Now, a jackrabbit asks nothing more of life than to be given a straight patch in which to run and he is always full of energy. But, to speed up the traffic and to take care of any lazy jacks that might get into the line, I have a plan. At intervals we could install a device similar to those used on oil wells for dropping small amounts of treating chemical. In these we would put that fluid known as "high life," used by farmers to cure their neighbors' cows and pigs of trespassing.

One drop of this will accelerate the pace of any animal in unbelievable manner. We should have to time this properly, lest a drop of it fall on the nose of a rabbit instead of his west end thereby causing him to go into reverse. However, timing should be worked out simply. Dr. Wilson, who handles our research, could do it quickly.

I am certain that if you will see this the way I do, our Standard Rabbit Transportation Co. will be one of our most profitable subsidiaries. There is an unlimited supply, increasing, we might say, by leaps and bounds. There is an assured market. We can bring seller and buyer together and our expense will be nil.

Please give this your best thought and if you agree with me, let us have a special meeting of stockholders right away to consider the plan.

Sincerely Yours,
LAWRENCE E. SMITH.

Born: To Mr. and Mrs. Harold A. Sackman, Wichita, a girl. Mr. Sackman is scout for the Empire Oil & Refining Co.

* * *

Married: In Frederick, Okla., Miss Robbie James and Myrl Brashear. Mr. Brashear is an oil operator at Olney, Tex.

* * *

Married: In Amarillo, Miss Hazel Maxey and Don Emery, general attorney in the Texas

Panhandle for the Phillips Petroleum Co.

* * *

Mr. and Mrs. P. M. Miskell have fled from the hot weather that has fried Tulsa down to a crackling. They went for a tour of the British Isles and will visit Paris. Mr. Miskell heads the refining division of the Empire Oil & Refining Co.

* * *

Married: Miss Angie Mae Smith, Mansfield, La., and Ernest L. Kistler, Tulsa oil operator.

* * *

It has been frequently argued in the conversation talk that oil is quite different from other mineral extracting industries in that an operator's property is subject to drainage by his neighbors. Now William G. Skelly, president of the Skelly Oil Co., has found, so he alleges, that lead and zinc are subject to drainage. He has filed suit in a court at Columbus, Kan., for $219,108. The suit is against several mining companies. Mr. Skelly contends that the miners ran their drifts beneath his land and took out lead and zinc. He asks, under the Kansas law, for three times the value of the minerals extracted.

* * *

D. C. (Chris) Williams has been made president of the Ponca City Gas Distributing Co., subsidiary of the Kay County Gas Co. The latter is owned by the Continental Oil Co. Mr. Williams succeeds Harry Moreland, who has become vice-president and general manager of the Great Lakes Pipe Line Co., which is being constructed by the Continental and Barnsdall companies to transport gasoline from the Mid-Continent to Chicago and other cities. Mr. Williams has been with the Kay County company and subsidiaries since 1919.

* * *

J. D. Dickinson, Kansas superintendent of production for the Empire Oil & Refining Co., has been made manager of land and lease, geological and production department of the Natural Gas Co. of America, headquarters in Kansas City. This company was formed by the same group of oil and gas companies that is constructing a gas line from the Texas Panhandle to Chicago. Mr. Dickinson held the position he has just relinquished for four years. He is succeeded by Charles S. Warren, Empire's superintendent in Texas and New Mexico.

* * *

That wide-brimmed Stetson hat and portable typewriter, which were the outward identifying marks of "Colonel" Horatio L. Wood, will be seen no more in whatever boom oil field comes along. He was buried in Tulsa July 29. A little group of old friends escorted him to that little plot of ground where he has found the peace that life denied his troubled spirit.

Oil journalism lost much of its color when this 79-year-old reporter went. Here was a man who was ever at war with the cosmos. The established order irked him. Specifically, in the oil business, the methods of the recent years were highly distasteful to him. The science of geology drew his most withering fire each day.

He raked the geologists fore and aft and wrote long articles to expose the abysmal ignorance in which he fancied they lived. The organic theory of the origin of oil was the monster he loved to attack. With his vivid style of writing, his extraordinary ability to turn sharp phrases, it all made good reading. His audience was large and in their sight he always stood somewhat apart from any newspaper or journal on which he was employed.

He was older by eight years than the Drake well. Therefore, the entire panorama of petroleum unrolled before his eyes. He started his career as a printer, in the days before the linotype and the high speed printing presses. He worked as combination news getter and compositor, when it was the custom for the printer to go out on the street, pick up the news, then walk to the case and set up the type without going through the formality of writing the article.

Those old boys knew how to spell and how to write rapidly. I first knew the colonel more than 10 years ago. He could sit down in the morning and turn out more "copy" in a day than anyone else around the place could write in twice the time.

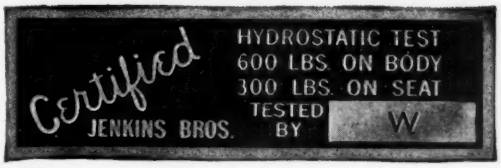
The colonel worked on nearly every oil journal in the country, past and present. He saw every major field development, and most of the minor ones, up to about five years ago. His last job was on a newspaper at Shawnee, Okla., where he got the oil page and took his turn at proofreading. His ability in the latter department was one of his points of pride. He always asserted that most of the expert proofreaders have gone.

He began to feel old age's infirmities several years ago, but he kept on working until about the first of 1929. His amazing memory and alertness of mind were still with him, but the iron constitution that had withstood more than 50 years of the unwholesome conditions of the oil fields finally failed him.

The colonel never made any money except his salary, he was too busy getting the news. His last year of life was made as pleasant as could be through the generosity of a group of old friends who have risen to fortune through the developments which the colonel so faithfully recorded. He was kept in a comfortable home and the best of medical attention and nursing was provided. But the machinery had worn out.

Up to the last he planned to resume his writing. Now that he is gone, it is in order to tell of the vision he had of showing the oil industry how to better its condition. He believed the refiners should develop new markets and, as a starting place, stimulate the sale of road oil. He was gathering figures on which to base an article that would show them an outlet that has been neglected.

A remarkable man. He left the world exactly even—with no more wealth than he had when he entered it. But, from the standpoint of adding something to the world's progress, he was a success. Through his writings men became acquainted with each other and with the industry in which they were engaged.



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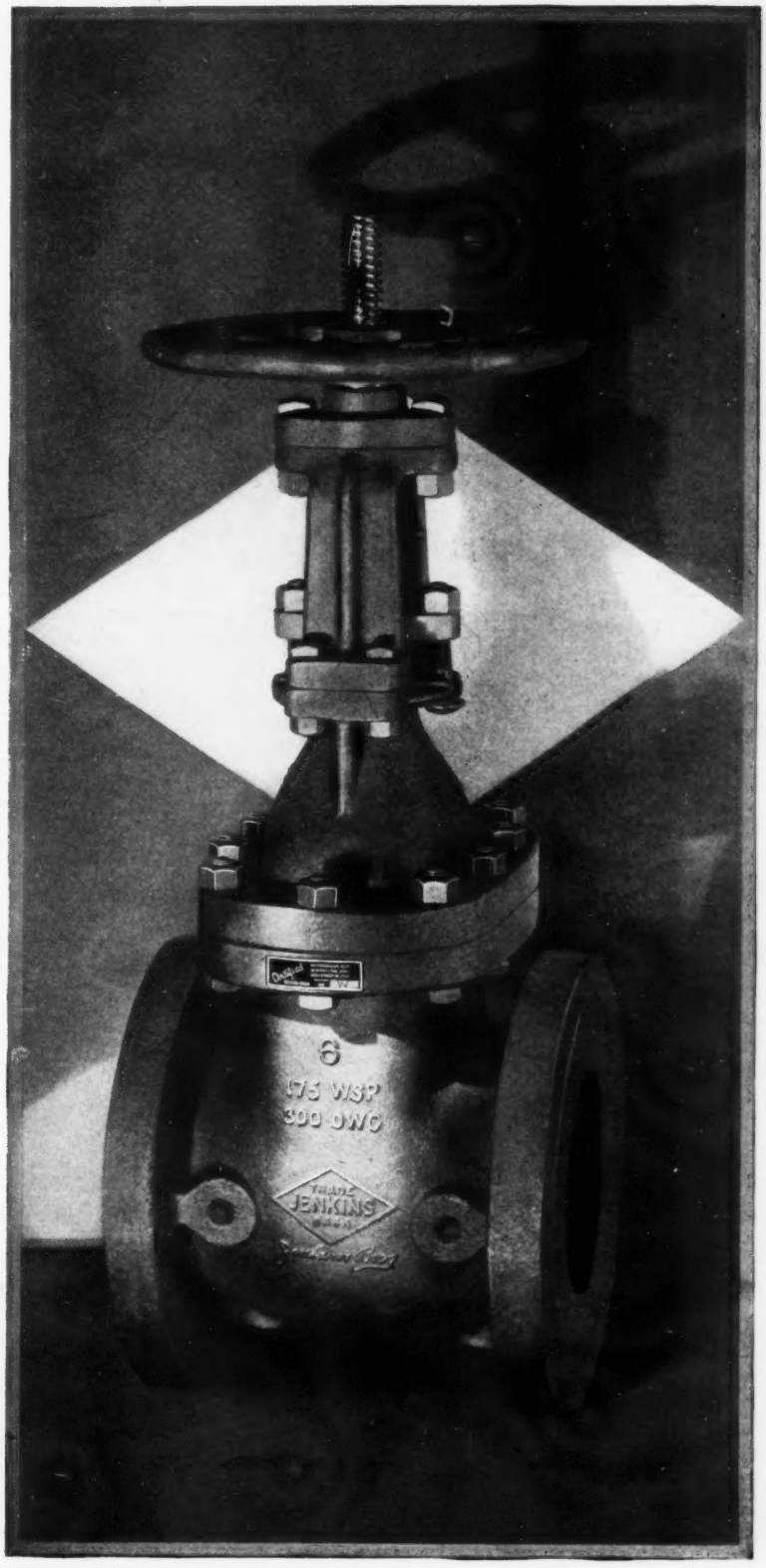
**Illustrated above is facsimile of certified brass plate carried by Fig. 253, Jenkins Medium Pressure Iron Body Gate Valve, rising spindle, illustrated at right* →



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West Asher Pool Has Three Failures; Eastborough, Kansas, Grows

TULSA, Aug. 2

PRODUCTION news in the Mid-Continent during the past week was not very exciting. First reports were few and drilling seems to have slowed down. There were a number of routine completions, but wildcats were not sufficiently encouraging to warrant offsets.

The Oklahoma City pool moved along as usual with several new big ones. In Pottawatomie county, Okla., the West Asher pool spread to the east as three failures were being completed on its north end. The Orlando area of Payne county, kept to its record of inconsistency with two Wilcox water wells.

Kansas had the most interesting reports. Its wildcats broke about even between failures and producers. The Texas Panhandle had several good completions though most of them were in well drilled areas.

Oklahoma City Pool

Even with the new proration schedule in effect the Oklahoma City pool produced upward of 100,000 barrels per day. The program calls for but 8 1/3 per cent of the potential and wells are opened for only one 24-hour period in 12 days. With the average daily number of producers varying between 40 and 50, the yield reached a peak of 140,826 barrels. It looks as if the operators might have to devise some new method of curtailment.

In the town lot area of the north end of the pool the wells continue to come in regularly and big. Several new locations were staked and most of them were on very small holdings. The wildcats north of the pool made progress as far as new hole is concerned but have not indicated any further possibilities for oil.

The West Asher pool of Pottawatomie county, Okla., continued to grow laterally while its northern limit was being defined. Four good wells were completed during the week though two of these were cutting initially. Both the Wilcox Oil & Gas Co. and the Indian Territory Illuminating Co., made good hits on the east. The No. 3 Atkins of the former, NE NW SW, 23-6-3E, had the sand from 3508 to 3541 and produced 2407 barrels on its first gauge. Offsetting this well on the north, the I. T. I. O., No. 3, Butler, made 1063 barrels in 15 hours with a trace of water.

In the extreme northeast corner of the pool the Pure Oil Co., No. 1 Case, SW SE SW, 14-6-3, started off cutting over 10 per cent. Its initial gauge was in the neighborhood of 2000 barrels. One location south of this well, the Prairie Oil & Gas Co., No. 5 Cryer, made 2405 barrels in 15 hours. It was not showing any water.

The Independent Shell and Gypsy Oil Cos., all had failures on the north end. All were drilled below 3600 feet and ended up with holes full of salt water.

These reports of the past week clearly indicate that the West Asher pool will neither be large nor long lived. Water appears to be close on all sides and the good wells must be carefully produced lest they fail to pay out.

Orlando Area, Payne Co., Okla.

Several good producers have been drilled in the wildcat territory known as the Orlando area of Payne county, Okla. They represent however, but a small portion of the total wells drilled. The past seven days added two more to the number of dry ones.

The Prairie Oil & Gas Co., No. 1 Finnel, SE SW, 5-19-1W, had a small show from 4869 to 4874. Into the Wilcox at 4926, the well had 1000 feet of water in the hole at 4935. It is still drilling. The No. 1 Shadell, of the Minnehoma Oil Co., NE SE NE, 7-19-1W, had a hole full of salt water in the Wilcox from 5064 to 5080.

The Prairie well is a north offset to the two good producers of the Reiter-Foster Oil Corp., which are both rated above 1000 barrels. The Minnehoma well is half a mile southwest. Inconsistency marks the area as well as the pay. The latter is the Misener sand.

Kansas

The East borough pool, east of the city of Wichita, is rapidly assuming major proportions. Its development to date is shown on the accompanying map. There are now seven wells completed, the latest of which is the Blankenship et al No. 1 Otto, NE NW, 30-27-2. This well is flowing 80 barrels per hour from a Chat pay, 2968 to 2970.

A number of new locations have been staked and an active drilling campaign is getting started. Initials in the area average well over 1000 barrels and all but one of the wells is producing from the Chat pay. The exception is the Vickers Petroleum Co., No. 1 Keys, NE NW NE, 30-27-2, which is getting its oil from the Wilcox. Having two oil horizons makes the pool doubly interesting.

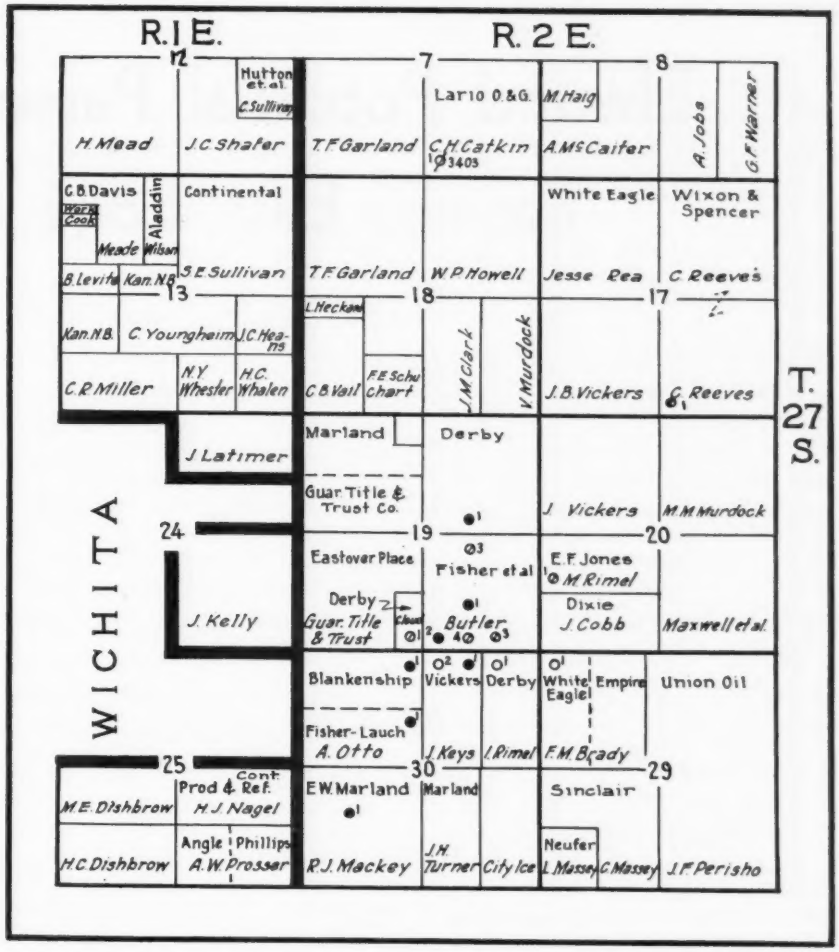
In the Raymond area of Rice county, Kansas, occurred a rather unexpected failure. The well of Branden-McClure, NW NE SW, 27-20-10W, had a hole full of water in what is locally called the Schurr sand. It had several fair oil shows, one from 3070 to 3075 and another at 3080 but none was commercial. It is possible that deepening may help the well, though present indications are not so good.

The Raymond pool is a little over a mile northwest.

Along the south line of Russell county, Kansas, there were two interesting completions. Due west of the Sellens pool, in the SE SW, 23-15-13W, the Prairie Oil & Gas Co., got a dry hole in the Siliceous. The total depth was 3291. The same company in a joint operation with the Empire Gas & Fuel Co., had better luck one mile west. This well, the No. 2 Oches, SE NE, 23-15-14W, topped the pay at 3360, and at 3371 swabbed 230 barrels for an initial.

Texas Panhandle

The most interesting well of the week in the Texas Panhandle was in Moore county. This was the Shamrock Oil & Gas Co., No. 1 Brumley, SE, cor, 360-Blk. 44. Three miles west and one mile south of the old Morton well, it is a rank wildcat. The well is still in the drilling stage but at a depth of 3340 it made one flow at the rate of 200 barrels per day. Should this be increased with deeper drilling, the area between this well and the producers on the east is very likely to have a play. The well is now shut down for storage.



Map of the Eastborough pool of Sedgewick county, Kansas, showing the development to date

Production Group To Meet In Galveston

HOUSTON, Aug. 1.—The southwestern district of the American Petroleum Institute division of production will hold its fall meeting at the Buccaneer hotel, Galveston, Sept. 4-5.

In addition to an extensive program of papers on field practice, the morning of the second day will be devoted to a "question box" on operating problems for which inquiries should be submitted in advance.

In order to facilitate "question box" discussions, operators are requested to submit their inquiries to E. S. Durward, Shell Petroleum Corp., Dallas, who will have charge of that feature.

District Chairman W. H. Meier, Atlantic Oil Producing Co., Dallas, and Carl A. Young, division secretary, have announced the following papers:

Results of Survey of Oil Field Equipment for Conformance to A. P. I. specifications, —W. C. Shutts, Humble Oil & Refining Co., Houston.

Equipment and Methods for Preventing Blowouts in Drilling,—group paper by southwestern district practice committee, C. W. Alcorn, Shell Petroleum Corp., chairman.

Advantages of Insulation of Oil Field Boilers,—Walter H. Meier.

Proper Installation of Gas Separators to Obtain Maximum Efficient Separation of Oil and Gas,—speaker to be selected.

Further Development of Cementing Practice in Gulf Coast Area,—continuation of studies of W. T. Doherty and M. Manning. Humble Oil & Refining Co., Houston.

Results Obtained in Yates field by Tubing Flowing Wells, —Harvey Hardison, the California Co., Midland.

Report of Committee on Designation of Flow Bean Sizes,—W. W. Scott, chairman, drilling practice committee.

Description of Deep Well Drilling in Big Lake Field,—Speaker to be selected.

NEW YORK—Ten tankships for American oil companies were under construction in this country the first of July. Sun Shipbuilding & Drydock Co. was building three of 9000 gross tons each for Standard Transportation Co., Standard of New York subsidiary. The same company was building two of the same size for the Tidewater Associated Transportation Co.

Bethlehem Shipbuilding Co. had two 6100-ton tankers on the ways for the Sinclair Navigation Co. Federal Ship & Drydock Co. was building two 15,000 gross tonnage tankers for Standard Shipping Co., Standard of New Jersey.

Manitowoc Shipbuilding Co. was constructing a 4550-ton tanker for Standard Oil Co., of New York.

Elwood Potential Passes 80,000 Barrels; East Edge Found

By Jack N. Westsmith
N. P. N. STAFF WRITER

LOS ANGELES, Aug. 1 DEVELOPMENTS in the Pacific Coast fields of Elwood and Playa del Rey, continued to provide the highlights in production news from that section. Reports on wildcats throughout California were unsatisfactory as far as new sands were concerned. There are one or two projects in the San Joaquin Valley and Coastal areas, drilling or preparing to drill at critical depths. These are being watched carefully by operators having acreage within shooting distance of the tests.

Two completions in the Elwood tidelands boosted that area's potential daily production above the 80,000 barrel mark. Several other wells, bottomed in the tidelands and in the earlier discovered mainland pay, are scheduled for production tests before Aug. 15.

Bankline Oil Co.'s ocean lease No. 89, well No. 6, yielded 1741 barrels of 38 gravity oil from 3228 feet. An estimated production of 4500 barrels was obtained from the other completion in the pool—Pacific Western Oil Co.'s well No. 5 on Lease 92.

The No. 92-5 was completed on July 22 for an estimated initial of 2250 barrels for 24 hours. At that time tubing was run to 2000 feet with the hole bottomed at 3474. During succeeding days excessive gas pressure caused the well to get out of control and decline in rate of flow. Field reports said the tubing had been pulled and the well completed through casing Aug. 1, for a rate of flow of 4500 barrels.

Reports also indicated an 8-inch line had been connected between the surface casing and storage tank. By opening a bean on the 8-inch gradually, engineers hope to flow the well wide open during a five-day flow test without having it sand up.

Seaward Oil Co.'s well No. 2 on Permit No. 91, on the extreme east flank of the Elwood pool, has been in trouble. Failure to obtain appreciable production in it is thought to nearly define the field's limits in that direction, making the adjoining leases to the east held by Barnsdall-Rio Grande interests of rather doubtful value.

Coming production tests on two outpost wells in the Playa del Rey pool are scheduled to hold the attention of operators in this field. To the northwest of Ohio's discovery, the Star Petroleum Co. is swabbing for a flow test on its No. 2 bottomed at 6640. Casting was set at 6450 feet over what was reported to be good sand—good at least for that area of thin sands dispersed with granite boulders.

Reports indicated this flank well had encountered the nonproductive schist at about 6600 feet. Although this could not be confirmed, it would be in line with showings from wells in the same general vicinity, Ohio abandoned its Howland No. 1, a northeast extension well after drilling over a hundred feet in the schist without finding sand pay. Star's test lies further in on the theoretical structural axis and reports indicate it is several hundred feet higher than the Howland. At any rate the coming production test will tell what may be expected from future townlot development in this end of the beach field.*

Another extension well due for a test is the Ohio Oil Co.'s Del Rey No. 2, approximately one and one half miles southeast of the Star test. Although drilled somewhat deeper than recent completions, the Del Rey is thought to have a fair chance of getting commercial production.

A new combine has entered into Playa del Rey activities. Barnsdall Oil Co. has teamed up with the Cypress Petroleum Co. to operate certain holdings in this pool on a 50-50 basis. These interests completed their first well the past week and have projects under way on other lots located along what is thought to be the del Rey structure.

Located between two mediocre pumpers, the George F. Getty interests obtained a good producer in their Venice No. 1. Late field reports gave a yield of 1185 barrels through a 1-inch bean with tubing and casing pressures of 265 and 800 pounds, respectively.

Barnsdall-Cypress Burks 1, also in this northwest play, was completed with an initial gauge of 295 barrels in 4¼ hours. Accompanying the oil flow was approximately two million cubic feet of gas having a gasoline content of 4.7 gallons per 1000 cubic feet. Pressures were higher than on the nearby Getty completion, ranging from 120 on the tubing to nearly 800 on the casing.

The productive conglomerate was cored at 6194 feet and the drill continued in the oil sand to 6245 feet where the basic serpentine was penetrated. This well is flowing through 3-inch tubing hung to 6018 feet with 9-inch casing set at 6065 feet.

While the dearth of production from some wells surrounding these two completions may be laid to bad spots the general opinion is that the failures deviated from the vertical, slipping off to the north. Some geologists hold to the contention that

*Note: For map see page 53, June 18 Issue, NATIONAL PETROLEUM NEWS.

an uneven rolling basic schist accounts for the variable thickness of oil sands and for consequent production.

By far the greatest activity is confined to the strip of town lots stretching along the ocean and cutting across the supposedly northwest trend of the field's long axis. Completion of the two extension wells would give this axis a length of over two miles.

Mingled with reports from strictly wildcat operations was the rumor that several proven fields are to be exploited below their present depths.

Of chief interest in this regard was the report of field scouts that the Getty interests were planning a deep test of the Santa Fe Springs pool. So far officials have denied the reports. As the scouts have it the company's Hill No. 50 is to be the scene of operations.

The Hill lease is ideally located for such an undertaking in that it is on the structural high and between producers that obtained production below 8000 feet. Previous tests of lower horizons were on flank leases of the Santa Fe Springs structure, to the south and southwest. While some oil was found, these outposts developed water to an extent that precluded commercial production.

Many geologists looked for production at "the Springs" below 10,000 feet in as much as the Miocene rock found productive for nearly 5000 feet at Long Beach was first penetrated at about 7500 feet in the inland field.

Another deep test in the Los Angeles Basin is under way by the St. Helens Petroleum Co. at Montebello. Its No. 15 is being deepened below 4343 feet in the western end of the field where shallow producing wells have yielded a steady flow of oil. In the nearby field of Coyote Hills, Standard Oil Co. reported oil showings in brown shale below 6125 feet. This semi-wildcat project developed some showings at higher levels that were passed up to seek a deeper horizon.

In the San Joaquin Valley, Weed Patch area, Shell Oil was running oil string preparatory to testing its Porter-Day wildcat. Located approximately seven miles southwest of Bakersfield. the test is bottomed at 5029 feet after coring oil sand below its previous unsuccessful test made at 4965 feet.

Continental Oil Co. is laying gas and water lines to its rig on Section 2, 22, 17, north dome, offsetting Section 35 of fee land. The question is being raised as to whether this new work on permit land will precipitate additional development on adjacent holding of fee acreage.

On the Western Front

By Jack N. Westsmith
Los Angeles

FINE weather brought a record crowd of 1000 oil men, more or less, out to the fourth annual barbecue and golf tournament sponsored by the Ventura Chamber of Mines and Oil. The affair, a strictly stag picnic, was held at the Wren's Nest in the Casita Pass, northwest of Santa Barbara.

George Trembly, winner of the 1927 tournament, tied Horace Smith with a score of 81 on the tricky Ojai Country Club course.

* * *

B. R. Cleeland, former treasurer and credit manager of Bessemer Gas and Engine Co., was recently made credit manager of the California division, Oil Well Supply Co., headquarters Los Angeles.

* * *

California operators, who remember the days of the Julian Boom, are watching developments of C. C. Julian in the Oklahoma City pool. It is said these projects are being financed by former stockholders, who have contributed so much per share on the basis of units held during this promoter's operations at Santa Fe Springs.

* * *

Marshall R. Simon, director and sales manager of United States Refining Co. was drowned recently while yachting in southern California. While cruising in the Los Angeles harbor with Clarence Gilmore, another oil operator, Mr. Simon lost footing and was washed overboard.

Although only 31 years old Mr. Simon was well known in the California industry, by his ability to work and to make friends.

* * *

Charles D. Wagner, Emsco Derrick and Equipment Co. has been busy the past few weeks manoeuvring his yacht in and around Cataline island.

Charlie holds the official title of vice president and sales manager of his company and has done much to place it in the prominent position it holds among the manufacturers of oil well supplies.

* * *

Union Oil Co. of California recently sponsored the formation of a glider club composed entirely of its employees and has provided the club with a primary glider and a course of instructions.

With a charter membership of 20, representing practically every department of the company, the first club was formed and plans are now under way to give this type of instruction to several other groups. The following "flights" of the club, however, will have to furnish their own glider.

Application was made for affiliation with the National Aeronautic Association, which provides regulations to govern organizations of this character.

The glider is maintained at Vail Field where members are given instructions each Saturday and Sunday. Although it is factory made, members of the club have added many refinements of their own design.

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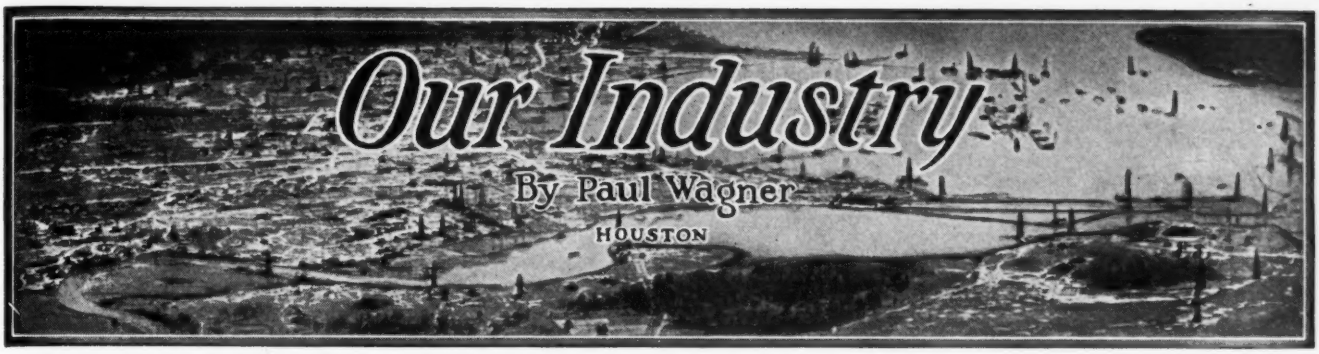


FREDERICK B. PLUMMER has been appointed professor of petroleum engineering at the University of Texas, beginning with the fall term, Sept. 15.

Mr. Plummer has been identified with geological work of the Shell Petroleum Corp., when it was still known as the Roxana Petroleum Corp.; Amerada Petroleum Corp.; Rycade Petroleum Corp.; and the Vacuum Oil Co. He directed the American Petroleum Institute research project 25-B on "Geothermal Investigations in Texas" and conducted geological surveys in New Hampshire and Wisconsin.

After receiving his B. S. degree at Dartmouth in 1909, Mr. Plummer attended the University of Chicago four years.

* * *

John Hatcher, general superintendent of the Yount-Lee Oil Co., Beaumont, with his family, spent his vacation in southern California.

* * *

Sidney A. Packard is in Oklahoma City temporarily, after resigning as chief geologist of the Louisiana Oil Refining Corp., Shreveport. He has been succeeded by A. E. Oldham, formerly of the Amerada Petroleum Corp.

* * *

Dr. E. H. Zeitfuchs, development department of the Standard Oil Co. of California at its Richmond refinery, is now president of the northern California section, Society of Automotive Engineers.

* * *

Dwight H. Bingham is engaged in geological work for the Creole Petroleum Corp., subsidiary of Standard Oil Co. of New Jersey, in Venezuela. He resigned from the Gulf Production Co., at Houston, to accept his new position.

John M. Muir, for many years in geological work in Mexico and Persia, recently resigned from the Texas Unity Oil Co., Dallas, to join the Southern Crude Oil Purchasing Co., subsidiary of Pan American Petroleum & Transport Co., with headquarters at Fort Worth.

* * *

Arthur M. White, Pere Marquette building, New Orleans, advises us of the formation of the Amalgamated Oil Industries, incorporated at Phoenix, Ariz., with capitalization of 800,000 no par shares issued at tentative valuation of $10 a share.

Operating offices are at New Orleans, company headquarters at Phoenix and financial offices at New York.

Officers are Mr. White, president; J. H. Rogers, Theo. W. C. North, and Olen W. Noel, vice presidents; John Kentzel, secretary-treasurer; E. A. White and A. F. Arnold, assistants secretary-treasurer.

Company holdings are described as acquired by lease, ownership, option and otherwise, consist of 1,625,000 acres in Venezuela and Colombia, South America; 2700 acres south of New Orleans and 2000 acres in the Zwolle, La., district.

Mr. White says the company also proposes to build two refineries, one of 6000 barrels daily capacity south of New Orleans and a 2500 barrel plant in South America. The company proposes engaging in the general business of production, refining and marketing.

* * *

Lloyd North now is practicing as consulting geologist at Houston. He was with The Texas Co. in South Texas, and afterwards represented Continental Oil Co. as its Gulf Coastal division manager.

* * *

Drillers on the No. 1 Santa Monica test well on the Aldamas structure, northern Nueva Leon, Mexico, are Everett Wolff and William Alsley. The test, reported making shows of oil and gas at 1200 feet, is owned by McMillan & McCormick Oil Co., represented at Tampico by G. T. Frix. Ten-inch casing was set at 1212 feet and drilling carried forward.

* * *

J. E. Maddox, formerly terminal chief clerk of the Huasteca Petroleum Co., subsidiary of Pan American Petroleum & Transport Co., Tampico, has been made chief accountant, with headquarters at Mexico City. Recently, Mr. Maddox has been in charge of the Pan American's distributing division accounting at Birmingham.

* * *

Roy A. Westbrook and associates, of Fort Worth, are planning a 3000-barrel skimming plant refinery on the Missouri Pacific railroad at Thrall, Texas. It will use crude from the Chapman field, a 4-inch pipeline of the Williamson County Pipe Line Co., an allied corporation. Westbrook and associates own production in the field, which has been wholly developed by independent operators.

* * *

Morgan May, formerly of El Dorado, Ark., heads the Hobbs Oil & Refining Co., which plans a 2000-barrel skimming plant at Hobbs. The company was recently incorporated for $100,000, backed principally by Mr. May and others in Lea county, New Mexico.

* * *

C. E. Moss, Panhandle division of The Texas Co., has been transferred to the Wichita Falls

"Bob" Ellis, pilot, R. M. Young and E. J. Sadler

land department. E. L. Alexander of Wichita Falls succeeded him in the Panhandle.

* * *

Officials of the Standard Oil Co. of New Jersey and its subsidiaries are more and more taking to the air. This mode of travel is in special favor with Ed. J. Sadler, production vice president of the New Jersey parent. In an accompanying picture, taken recently in the southwest, Mr. Sadler is shown at the right. "Bob" Ellis, pilot, is at the left. In the center is R. M. Young, president of the Carter Oil Co., Tulsa, a New Jersey subsidiary.

* * *

Clyde M. Bennett, crude oil manager of the Vacuum Oil Co., plans spending August in California, combining business and pleasure. He left Houston late in July for Los Angeles and San Francisco, planning his return via Salt Lake City and Colorado Springs.

* * *

C. L. Bulbert, Tampico manager of Oil Well Supply Co., is spending his vacation in the United States. W. P. Laseter, vice president of the Oil Well, is in charge at Tampico in his absence.

J. C. Rohlfs, manager of the marine department of the Standard Oil Co. of California, San Francisco, has been named chairman of the board of governors of the California State Nautical Schoolship by Governor C. C. Young. The California legislature recently appropriated $115,000 to maintain the schoolship two years. The federal government, which has designated a shipping board vessel for the school, also appropriates funds yearly for its maintenance.

* * *

Jesse Bullard of the Shell Petroleum Corp. has been elected president of the southwest Texas Oil Scouts Association, succeeding D. C. Dewitt of the Simms Oil Co. Joe L. Cullinan, Republic Production Co., was named vice president and M. J. Bonham, Continental Oil Co., secretary-treasurer. C. O. Maddox and J. Stanley Smith, independent oil operators, are associate members of the executive committee.

* * *

Clarence E. Hyde, one of the principals in the Westyde Investment Co., operating principally in West Texas and Oklahoma, has returned to Fort Worth after a business trip to South Texas. Chester H. Westfall of Ponca City, Okla., president of the company, is spending the summer in California. Before engaging in business for themselves, Messrs. Hyde and Westfall were both executives in Marland companies.

* * *

Joe W. Elsbury, crude oil buyer for the Crown Central Petroleum Corp., Houston, is back home after business trips to Fort Worth, Taylor and elsewhere in central Texas.

* * *

R. A. Broomfield, president of the Barnsdall Oil Co. of California, Los Angeles, has been touring the northeastern states and eastern Canada.

* * *

Walter Tschudin, head of the Sinclair Mexican Companies at Tampico, isn't content merely to ride in airplanes. He prefers to navigate them. His first solo flight was early in July after taking lessons from Aviator Hoffman at Tampico.

* * *

Phillip B. King is spending the summer mapping the Marathon uplift of West Texas for the United States Geological Survey.

* * *

B. C. Renick is in the geological department of the Vacuum Oil Co., stationed at San Antonio.

* * *

James D. Sisler is state geologist of West Virginia. He was assistant state geologist of Pennsylvania. The resignation of David B. Reger as associate geologist on the West Virginia Geological Survey is announced, effective Aug. 30.

* * *

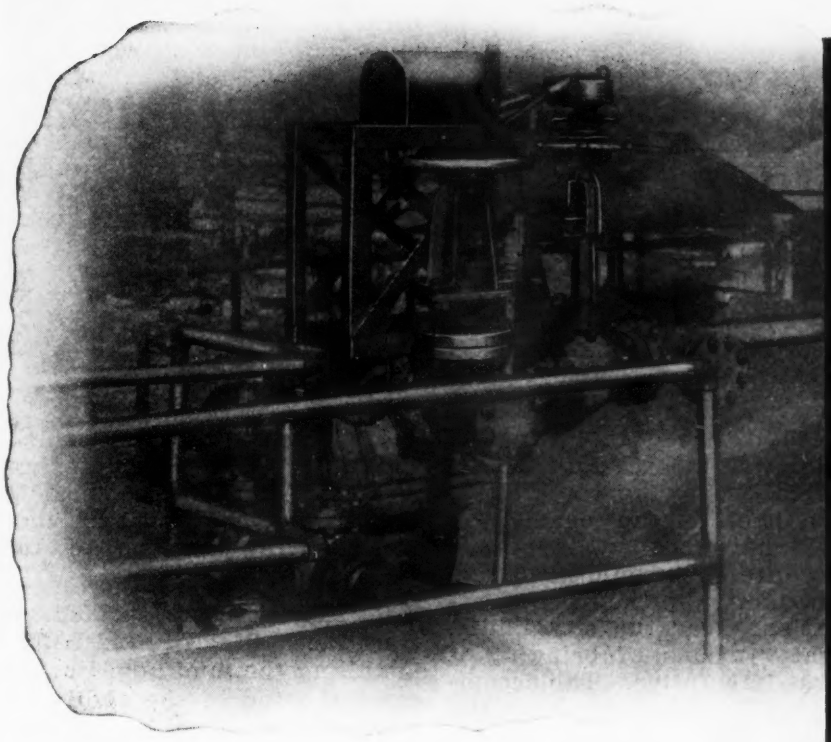
H. S. Lyne, Lakes Entrance, Victoria, Australia, writes the American Association of Petroleum Geologists that it has been proved that oil exists in Australia. After a search of more than 16 years a 10-barrel well was completed at 1250 feet in the district of Gipsland, 200 miles east of Melbourne.

The drilling site is one mile north of the coast near Lakes Entrance, reached by steamer from Melbourne or by train to Bairnsdale, 23 miles away.

Gas was found with the oil, but not in sufficient quantities to make the well flow. The oil is of dark green color, containing about five per cent gasoline, 24 per cent heavy kerosene, 18 per cent light lubricating oil, 12 per cent medium lubricating oil, 27 per cent heavy lubricating oil and 16 per cent bitumen, according to Mr. Lyne.

* * *

E. A. Berry is in charge of the Atlantic Oil Producing Co.'s operations in the Hobbs field, New Mexico. He also supervises West Texas development from his headquarters at Wink.



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Oklahoma City Wells Safely Completed By New Mud Separator Method

By William F. Lowe

N. P. N. STAFF WRITER

OKLAHOMA CITY, July 31 ANOTHER safe method of bringing in the big town lot well at Oklahoma City has proven practical. It is known as the mud separator method. It is a solution to the problem of completing wells in the settled area.

Its purpose is the cleaning of new wells without spraying the country side with oil and mud. Results have been manifold. Aside from the elimination of the former wasteful practice of blowing the wells into the air, the new method greatly reduces the fire hazard.

The latest completion by this method was that of the Phillips Petroleum Co., No. 1 Compress, SW SW SW, 36-12-3W. The well is located on the edge of the city and close to a thickly settled district. Its estimated initial was in excess of 25,000 barrels. Allowing the well to clean itself in the usual way would have been a dangerous procedure. It would also have been counter to the drilling restrictions near the city limits. A safer means of bringing it in was imperative. The accompanying illustrations show the method used and show the detail of the hook-up for the mud separator.

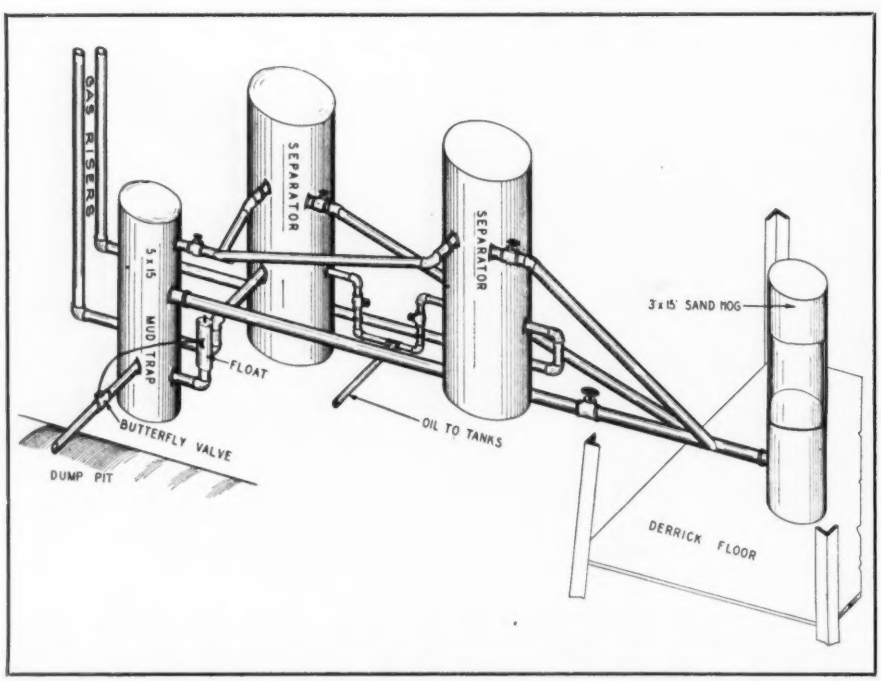
Over the casinghead and above the control gates is placed a 3 x 15 separator shell or mud hog. It is flanged to the top of the casing. A four-foot nipple protrudes above this flange on the inside of the shell. Around the wall of the mud hog, several feet above the upper end of the nipple, a plate, 1 1/16 inches thick, is welded. This is the wearing plate and it takes most of the shock of the rushing field as it expands after leaving the top of the nipple.

Some operators prefer to start the bailing of mud before installing the mud hog. In such cases the top of the shell is a solid piece of steel of 1¼-inch thickness. If the bailing is to be done after the mud hog is hooked up, a 10-inch opening is made in the top. Through this hole a bailing nipple is run to the top of the short flow nipple and is only removed when the well begins to flow. The top opening is then closed with a bull plug.

It will be noted in the photograph that the latter method was chosen on the Phillips well. As an additional safety measure the lashings which hold down the mud hog are also used to hold the bull plug. On other occasions great slugs of mud have blown the plug out and it is now the custom to anchor it as shown. Wire lines and large turnbuckles are used for the purpose.

The mud hog shell is of 800-pound test and has a 500-pound working pressure. It was first thought that a heavier separator would be needed because of the 2200-pound rock pressure. A striking discovery was made on the first well, however, when it was found that the pressure inside the shell seldom exceeded 40 pounds. This was due to the large expansion chamber above the casing and to the 12-inch outlet line.

This line leads to a special separator which is called a mud



Detail of hook-up for the new type of mud separator used by Phillips Petroleum Co. at Oklahoma City as a safe method of bringing in wells without the spraying of mud and oil

trap. While the well is being allowed to clean itself all of the fluid goes directly to this trap, the flow gates to the regular separators being closed. The heavy fluid float, shown on the side of the trap in the drawing, raises to tip a pilot valve as the fluid enters. Gas pressure through this valve causes the quick opening of a butterfly valve in the 10-inch discharge line. The fluid then flows through the line to the sump.

The primary purpose of these valves is to prevent the escape of gas through the discharge line. They are safety devices which eliminate danger of drifting gas at ground level. So long as the heavy fluid level is sufficiently high for the float to function, the gas must go out through the upper lines to the larger separators.

From then it goes to the risers and into the air some 50 feet above the ground. If the float is not kept high enough to hold the pilot valve open, the valve in the discharge line closes automatically and prevents gas slugs from passing. Most of the oil is also forced into the separators.

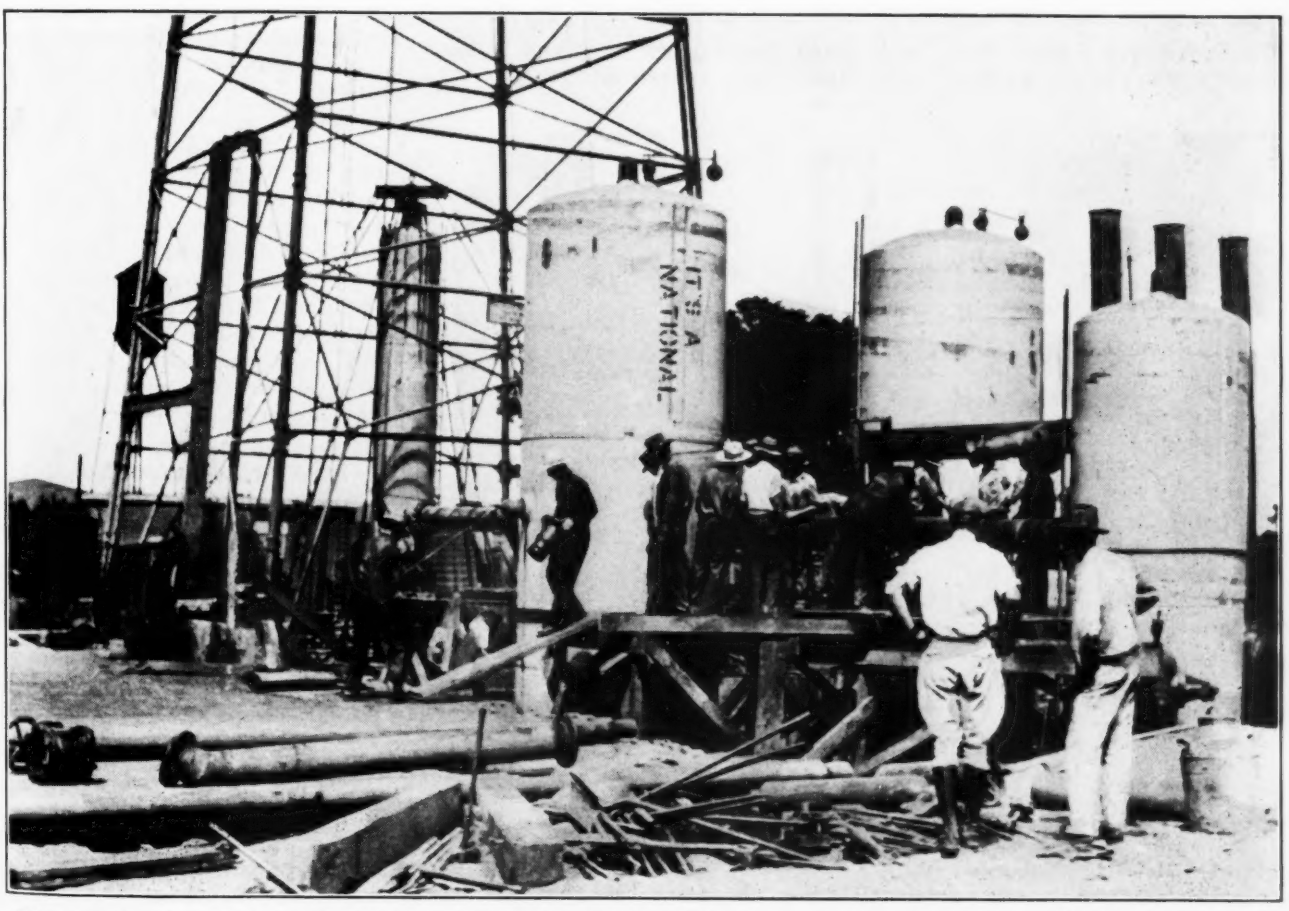
As the flow into the sump clears of mud and shows more and more oil, the flow gates to the large separators are opened and the gate on the 12-inch line to the mud trap is closed. The time required for the complete cleaning of a well varies from 30 to 45 minutes. When this is done the mud trap has served its purpose and is disconnected. After being cleaned it is then ready to be used on another location.

The mud hog on the derrick floor may be retained in the same position if the well shows a tendency to sand cut the fittings. This is quite characteristic of the sand wells at Oklahoma City and the sand hog makes an ideal flow head. The use of a separator shell for this purpose was illustrated and described for the first time in National Petroleum News, May 21, 1930.

The well upon which this original installation was used was the No. 4 Hoopes of the Skelly Oil Co. J. R. McWilliams, chief production engineer of that company, conceived the idea and directed the experiment. Its success resulted in the adaptation of the principle to the separator method of bringing in wells.

This method is coming into general use in the town-lot area at Oklahoma City. That it will be used over the entire field and in other large producing areas is quite probable because it offers a solution to several problems. By eliminating the country side spray it takes the oil operator out of the truck garden business. He will no longer be forced to pay fancy prices for stunted corn and it might reduce the purchases of dead prize live stock.

The reduction of the fire hazard is obvious. But there is also a great saving in oil. It is claimed by the manufacturers and patentees, the National Tank Co., that this saving is sufficient on one well to pay for the installation.



Photograph of mud separator hook-up used on the Phillips Petroleum Co. No. 1 Compress, Oklahoma City field

Suspension Bridge for Rod Line Lengthens Pumping Stroke

By William F. Lowe
N. P. N. STAFF WRITER

TULSA

TOPOGRAPHIC irregularities are the cause of reduced efficiency in power pumping. So often has this proven true in the Mid-Continent that more and more engineering skill has been required to overcome the natural handicaps.

Where the terrain of the property is level the problem is simple, but a large percentage of leases present topographic difficulties. This is particularly true of the Osage. In this area, the Prairie Oil & Gas Co., on its Joe Kelsey lease, 31-25-8, has introduced some modern ideas in bridging.

All of the wells on this 160-acre property are not yet drilled. However, as they are completed they are being put on one centrally located power. This necessitates some long rod lines.

A stream valley on one side of the lease presented a serious obstacle to the stretching of these lines. On other properties the usual procedure for crossing such a depression had been to keep the rod line as near the ground as possible. Large swings and hold downs were used as the rods were stretched down on one side and up the other.

On this particular lease however, a suspension bridge gives more efficient service. By carrying the rod line straight across the valley from the top of one bank to the other, many desirable results are obtained.

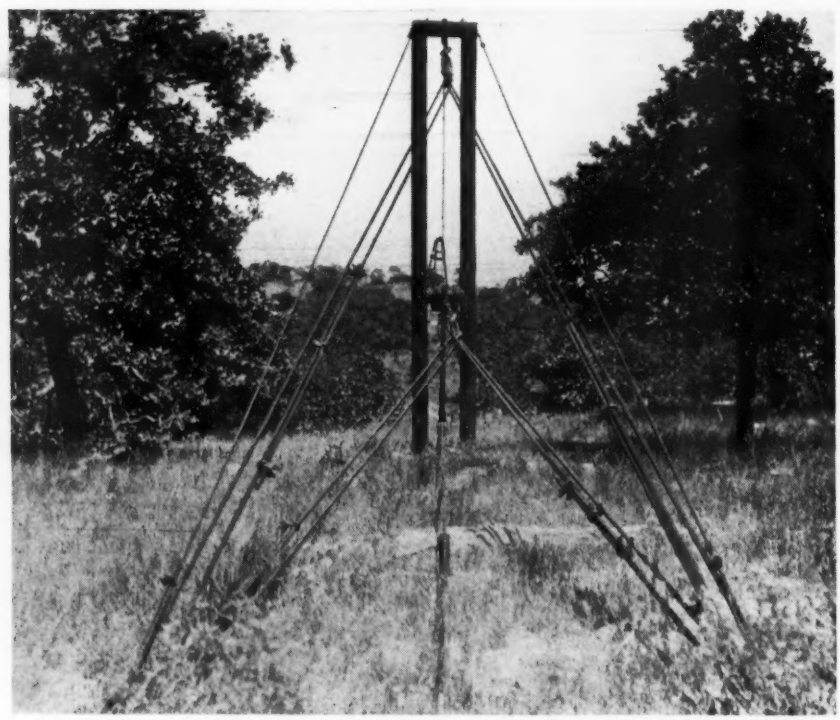


Fig. 1—Detail of anchorage nearest to power. Note bracing and that only two turnbuckles are used in stretching the two suspension cables. The top of the rig which is being served by this line may be seen between the uprights just above the swing. It is over 1000 feet away

Not only is the line considerably shorter but the delivered stroke length is nearly twice as long. The whole line from power to well is 2900 feet. The power imparts to it a stroke of 32 inches, of which 28 inches is now being delivered at the well.

Had the line been laid in the usual manner across the floor of the valley, it is questionable if the stroke at the well would have been greater than 16 inches. The increased production due to the longer stroke will pay for the installation.

Its cost though, is not as much as the older method. In this particular case the valley is divided into two parts by a ridge near its center. A flood stream occupies the side nearest the power. With the old system of hold downs and swings, at least seven, all with concrete foundations, would have been necessary to cross the depression. This number might have been cut to four had the ridge been tunneled. In either case, there would always have been the danger of its being washed out during flood periods. Either would require more power to operate and be less efficient.

The suspension idea solved all these problems. The detail of the anchorage nearest the power is shown in Fig. 1. Two others, similar to this one, complete the bridge which holds the rod line in a horizontal position.

The well may be seen in the background between the uprights. The distance from the anchorage is illustrated to the one on the intervening ridge is 500 feet. From the latter to the one on the far bank, 300 feet. This makes a total of 800 feet of rod line suspended in the air.

The uprights for all anchor-

Fig. 2—Photo showing the swing between the uprights, the lower suspension cable and the method of holding the rod line in a horizontal position. Note the simplicity of the hinged clamps used for this purpose

ages are made of 18-foot lengths of junk 6-inch casing. They are set in six feet of concrete and braced with ⅞-inch junk wire line. All of the latter are attached to deeply buried deadmen.

It will be noted that two suspension cables are used. One of these is swung over the cross arm on the top of the uprights and the other over the swing. Note that only two turnbuckles were used in stretching these lines.

The detail of the swing and the lower line is shown in Fig. 2. Attached to the latter at about 10-foot intervals are special clamps with simple hinges on their under sides. A similar clamp is attached to the rod line below and the two are connected by 5-foot sections of old sucker rods.

To support the whole line, 81 of these rods were used. As the power causes the rod line to move back and forth, these rod supports have the same motion and function as the swing between the uprights.

The upper suspension cable gives additional strength and rigidity to the lower. It is connected to it with adjustable clamps and lines, by means of which the horizontal position of the rod line is maintained. Both cables are ⅞-inch junk line and the rod line is made of old sucker rods. All three, with their braces and suspending rods, offer little resistance to the wind and their position removes the danger of washout.

Since the wells have not been drilled uniformly about the power, it has been necessary to counter-balance it. Fig. 3 is an illustration of the dummy used for this purpose. Here again, junk has been used to advantage.

The heavy uprights are old 10-inch casing, the frame of the weight box 6-inch casing and the bed is welded 3-inch tubing. Only the triangular frame and bearings were purchased for the purpose.

The position of the dummy with reference to the power is on the opposite side from the pumping wells. This is the usual procedure. It will be noted however, that the dummy is mounted in an unusual way. Its bearings are nearly six feet off the ground. In its present position it forms a counter-balance for wells on the far side of the power but it is located in a direct line to an undrilled location.

When the well on this location is complete, the position of the weight box will be reversed and the weight slightly decreased as the new well is attached to the base of the triangular frame. The height of the dummy permits this to be done and, being reversible, does away with the necessity of building an additional counter-balance.

The wells on this lease have an average total depth of about 2500 feet. Their average daily yield is in the neighborhood of 100 barrels per well.

Pittsburgh Equitable Meter Co., Pittsburgh, held a salesmen's meeting at St. Louis during a convention of the American Water Works Association in June.

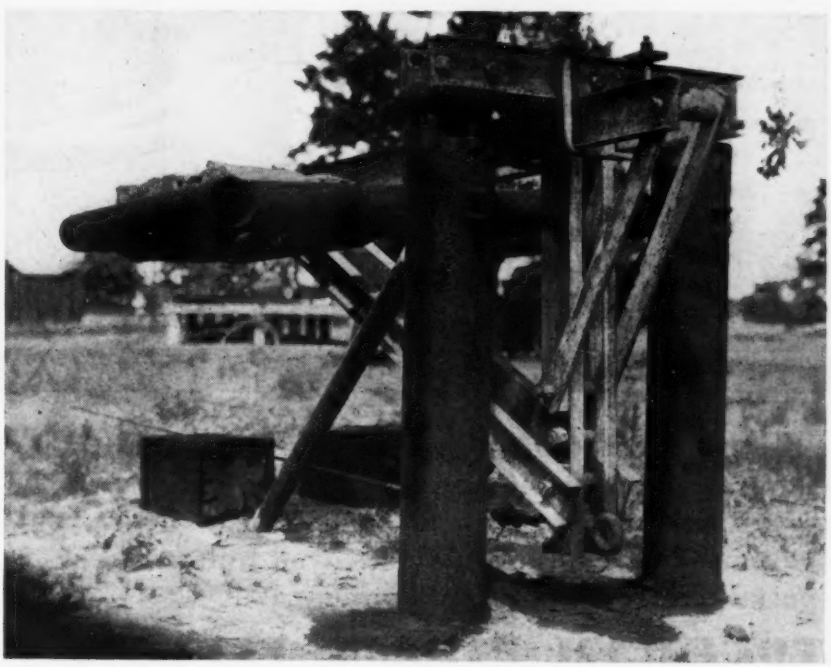


Fig. 3—High mounted and reversible counter-balance dummy made largely of junk material

Approved by LORECO

•••

STOCKHAM RETURN BEND

Photograph is of Stockham Return Bend installation in an improved and perfected cracking unit, Still No. 5 of Louisiana Oil Refining Corporation, Shreveport, La.

	Pressure	Temperature
Coil Inlet	1,000 lbs.	640° F.
Coil Outlet	700 lbs.	920° F.

Louisiana Oil Refining Corporation, Shreveport, La., are most gratified with the successful operation of their installation and are pleased with the part Stockham Return Bends have played in making this improved unit a success beyond expectations. We congratulate them.

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Storage and Handling of Natural Gasoline at the Refinery

By E. H. Jones*

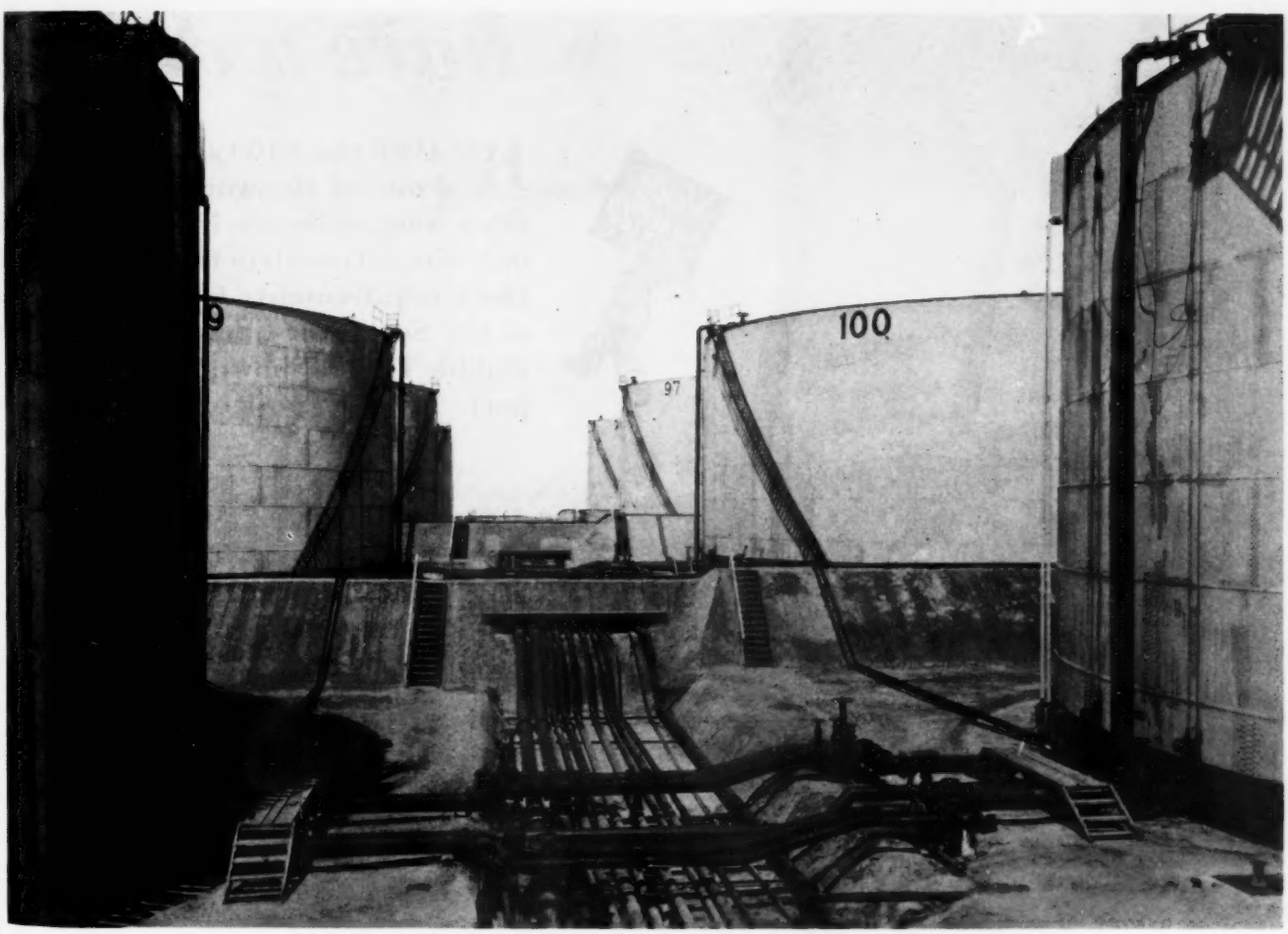
BECAUSE of its volatile nature, natural gasoline has been considered an unstable commodity. This characteristic has proven a very difficult factor in the problem of storing this product and has necessitated either its immediate consumption or its blending with less volatile commodities.

Natural gasoline, like the natural gas from which it is derived, has usually been thought of as perishable and has been consumed as produced. If producers had been prevented from shipping or blending this product during the early life of the industry, practically every absorption plant would have discontinued operations within a comparatively few hours time because of the inability to store the current production. For this reason an increase in the amount of absorption gasoline produced on the Pacific Coast during the past two years has made it necessary that either the consumption keep pace with the supply or that an improvement be made in the method of storing this temperamental commodity.

Lack of a stable natural gasoline capable of being economically stored in large quantities produced an unstable price situation and any production in excess of immediate demands often resulted in bargain prices. The same problem that has confronted the crude oil industry—over-production—has also been a constantly growing menace to the natural gasoline industry. Not only does the production of natural gasoline vary as a direct function of crude oil and natural gas production, but marked improvement in the efficiency of extraction of absorption plants has added very materially to the quantity of natural gasoline produced.

Only during the past three or four years has the quality of natural gasoline been given any serious consideration. Prior to that the gauge of the efficiency of a gas absorption plant was taken as the maximum quantity of condensate that could be extracted by any known method. Quality was not considered in determining either the efficiency or the price of the finished product, but with an increase in the supply, which has com-

*Union Oil Co. of California.



Natural gasoline storage tanks showing hook-up of vapor gathering lines

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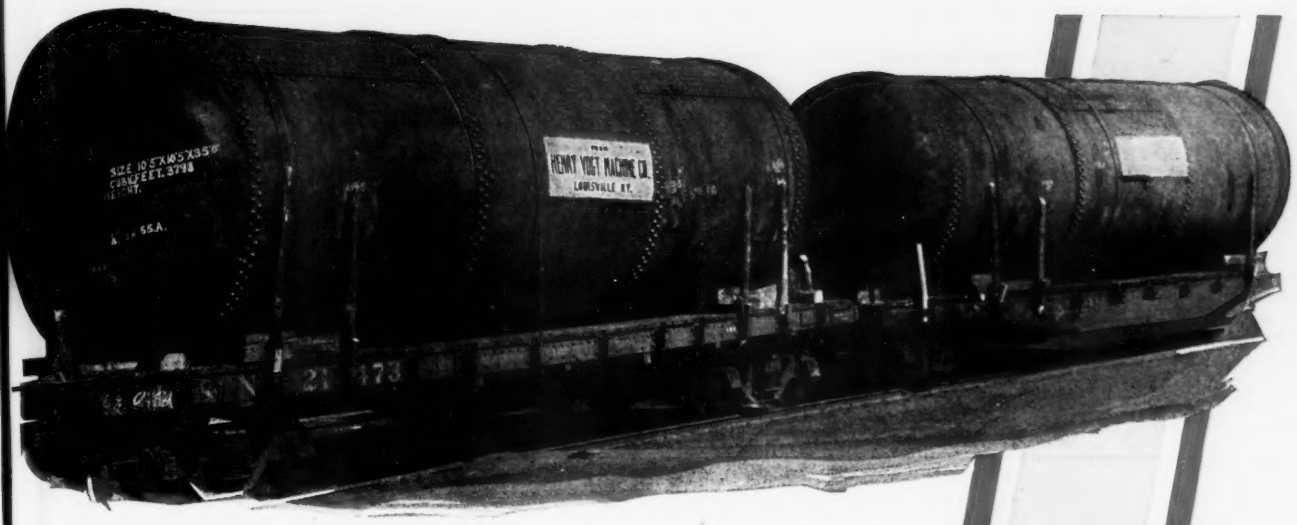

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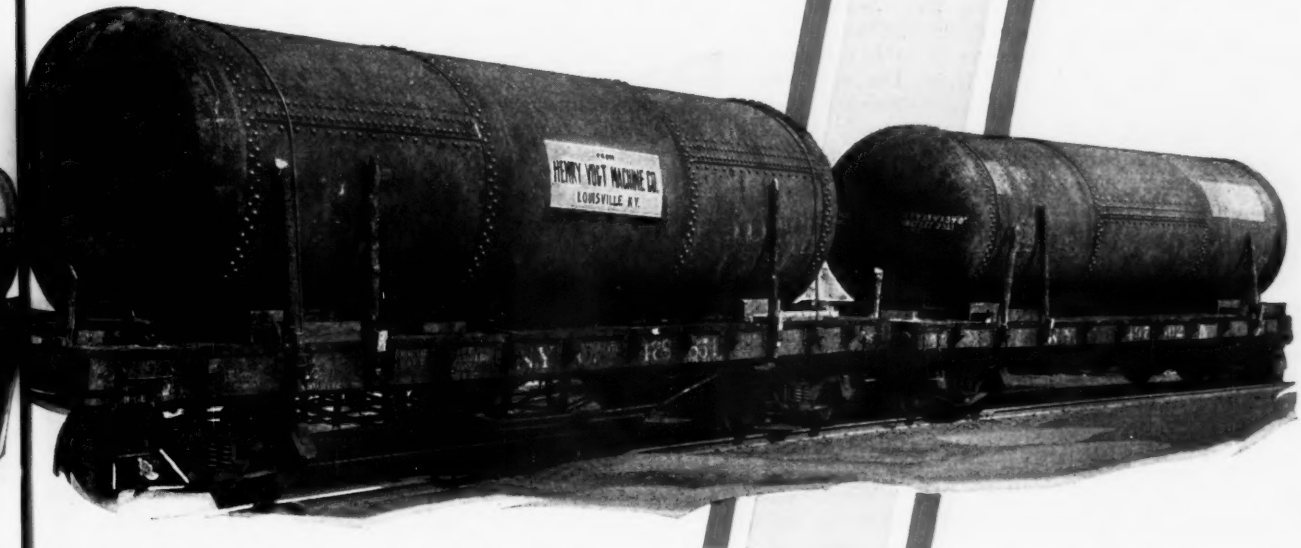

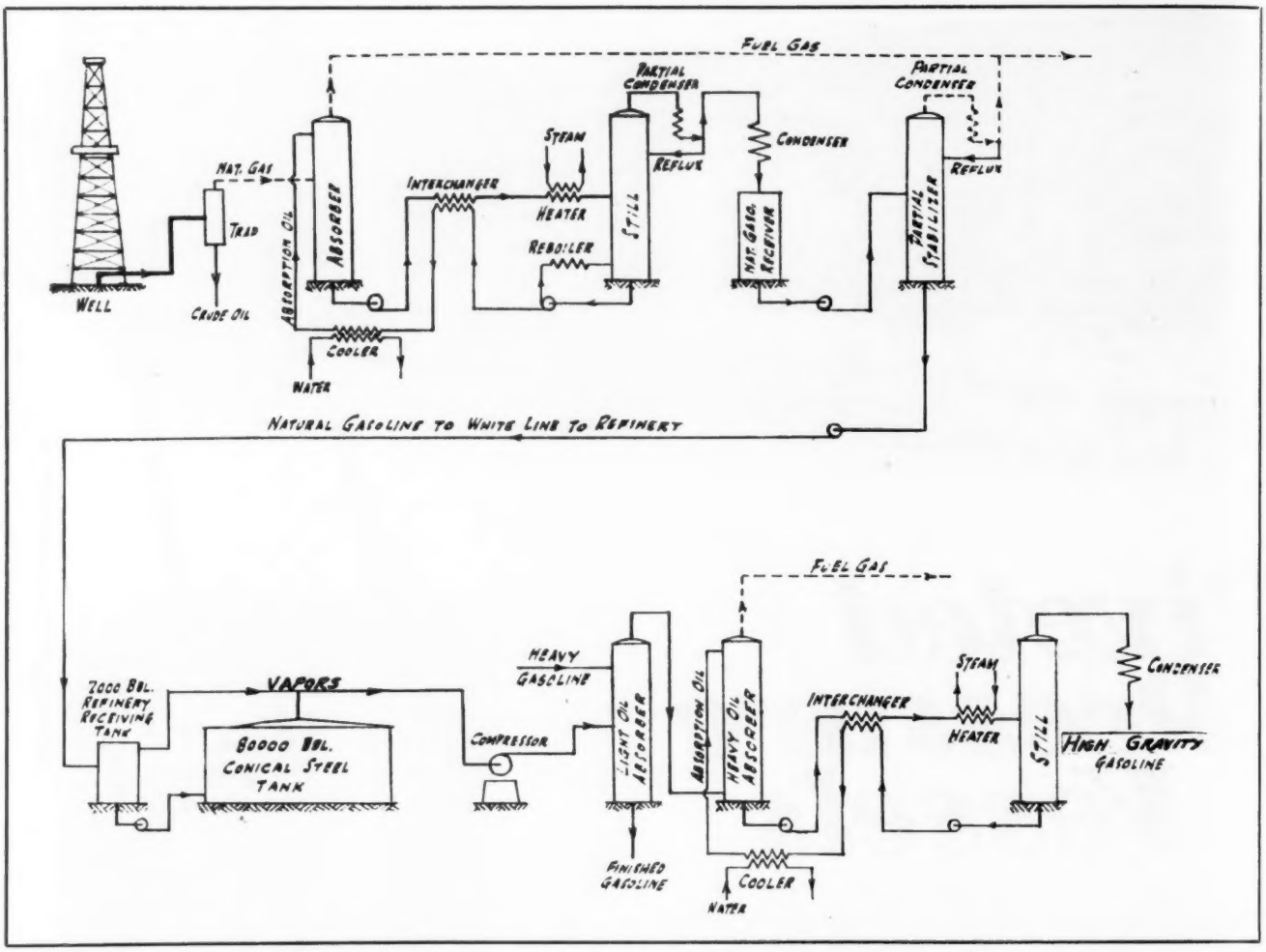

Flow sheet indicating source and disposition of natural gasoline

pelled consideration of quality, there has been a marked tendency toward the production of a more stable finished natural gasoline.

Stabilization is a relative term. It might be defined as the ability of a gasoline to resist loss by evaporation. The refiner is by far the greatest consumer of natural gasoline and depending upon the blends desired, a natural gasoline that might be comparatively stable to one refiner might be considered extremely wild by another. A more volatile natural gasoline may be used, in blending, if the proportion of it to straight run is low than if it is high.

An ideal natural gasoline considered from the standpoint of economic and safe handling should be free of Iso-butane and lighter fractions and should contain only enough normal Butane to result in its vapor pressure being less than 14 pounds absolute at the maximum storage temperature encountered during the period of handling. If the natural gasoline is to be blended before release of pressure, or before higher temperatures are encountered, the composition and vapor pressure of the desired mixture should not exceed the mentioned values.

Of course, in actual practice, blends to obtain a desired character of motor fuel receive consideration as well as storage and handling facilities. Although the quality of natural gasoline produced today shows a marked improvement over that produced several years ago, there still remains a wide variation in the proportion of the various constituents contained in the finished product and a corresponding variation in the degree of stabilization.

In order to handle large quantities of varying qualities of natural gasoline economically and in order to meet the wide variation in demand for the finished product, the refiner must very closely study his method of handling. It was formerly the custom to blend the volatile natural gasoline with crude oil, but this entailed high evaporation loss during the distillation process, redistillation costs and fire hazards due to the varying concentrations of very light fractions in the crude oil. Natural gasoline also was disposed of by blending with tops and later, when improvements in distillation methods resulted in the direct cut of gasoline from crude oil, heavier gasoline and gasoline fractions were substituted as blending materials.

When crude oil was used as a blending medium, the proportion of natural gasoline was kept low—between 5 and 20 per cent. In the early stages of storing natural gasoline with straight run gasoline, a ratio of 50-50 was used but gradually the percentage of heavy gasoline was decreased until it became as low as 15 per cent of the mixture. The next step was the storage of natural gasoline without mixing it with other commodities, in standard 80,000 barrel conical, steel roofed tanks under approximately atmospheric pressure.

The two factors contributing to making it possible to store vast quantities of straight natural gasoline have been the manufacture of more stable gasoline and improved storage facilities. The principal factor contributing to the improved storage conditions was the continual development of the waste vapor recovery system. Vapors lost through evaporation are collected and conserved.

The process of conservation is a selective one and results in the retention of desirable fractions to be used in motor fuel and the utilization as fuel gas of the fractions unsuited for commercial gasoline. The latter step is accomplished either directly in connection with refinery equipment or by compressing the heavier fractions and marketing as "rock gas" in pres-

sure cylinders. Waste vapor recovery systems have been in operation about as long as the absorption method of gasoline recovery from natural gas.

A very effective and economical system has been developed by the Union Oil Co. of California to handle natural gasoline production, transportation and storage. Company owned absorption plants and other absorption plants from which major purchases are made are located at some ten points in the Los Angeles Basin. Gasoline is collected by gathering lines and delivered to the company's "white line" under sufficient pressure to force the gasoline to the terminus—Los Angeles Refinery in the harbor district.

In general, the quality of the gasoline is such that it is practically free of propane and the Iso-butane content is relatively low. The fluid is gauged before shipment and also upon receipt at the refinery. Differences, including pipe line losses, are very nominal and average less than 0.10 per cent per month on the handling of from 150,000 to 300,000 barrels.

The average pressure under which the natural gasoline is gauged in the field is 15 pounds. It is delivered to the refinery receiving tanks—2000 barrels capacity—under a pressure of approximately one pound gauge. After the quantity and quality of the gasoline has been determined, it is pumped to 80,000 barrel steel roofed storage tanks and held for blending or cargo shipments. From 100,000 to 700,000 barrels of straight natural gasoline is maintained in storage in order to care for the fluctuations of supply and demand.

Storage losses of natural gasoline at the refinery are divided into two parts—one taking place from the receiving tanks and the second from the storage tanks. In both instances the evaporated material is drawn through collecting lines and delivered under low pressure by compressors to the recovery plant. Losses, of course, vary widely depending upon the quantity and quality of natural gasoline handled and upon atmospheric conditions.

Gauged receiving losses vary from 0.50 per cent in the winter months to 3.50 per cent in the summer months, based upon the quantity received. Gauged storage losses average during the same periods from 1.0 per cent to 3.00 per cent per month on the basis of the average quantity of natural gasoline in storage. The collected vapors representing the foregoing gauged liquid losses are subjected to selective absorption in the conservation plant and are recovered either as commercial gasoline or as fuel gas.

Due to field stabilization and to controlled loss by evaporation, the quality of the natural gasoline shows a marked improvement as the storage period advances. Table 1 shows the composition, vapor pressure, and Engler distillations of corresponding samples. Necessarily these individual samples do not represent identically the same material at consecutive stages.

Table 1

Composition

	Propane	Iso-Butane	Normal Butane	Pentanes Plus
As extracted from natural gas	8.50	8.14	30.03	53.33
As delivered from field plants	0.58	6.72	15.92	76.78
As delivered from refinery receiving tanks	0.44	4.38	13.43	81.75
As delivered from refinery storage tanks	0.30	5.35	16.24	78.11

Vapor Pressure (Beistle & Prather Method)

	@ 70°F.	@ 100°F.
As extract from natural gas	28.0	47.0
As delivered from field plants	16.9	26.3
As delivered from refinery receiving tanks	14.7	24.2
As delivered from refinery storage tanks	12.4	20.6

Engler Distillation (D76-27)

	Grav.	Init.	10%	70%	80%	90%	Per Cent Max.	Per Cent Rec.
As extracted from nautral gas	89.1	52	76	290	.....	.....	330	77.0
As delivered from field plants	80.8	60	77	185	211	274	348	92.5
As delivered from refinery receiving tanks	79.2	78	84	185	210	268	328	94.0
As delivered from refinery storage tanks	77.5	71	87	185	211	252	344	94.5

Partial field stabilization resulted in the rejection as fuel gas of approximately 8 per cent of the material which had formerly been gauged as gasoline. Controlled evaporation at the refinery has resulted in the separation as vapor of from 2 to 6 per cent of the natural gasoline received. The vapors are subjected to selective absorption in the refinery conservation plant and the residual natural gasoline is available for blending purposes and cargo shipments.

Natural gasoline is received and gauged at the refinery in one of two 2000-barrel steel pressure tanks. Pressures varying from zero to three pounds gauge are carried, depending upon atmospheric conditions and quantity and quality of receipts. Vapor gathering lines lead direct to pressure blowers and to the first stage absorbers. Natural gasoline is pumped practically continuously from the two 2000-barrel receivers to a block of 80,000-barrel steel tanks. From five to ten tanks are used for this service.

Tank roofs are conical steel, 3/16-inch gauge material, and are fitted with vapor tight gauging inlets and ordinary and emergency vacuum and pressure relief valves. Ten-inch diameter vapor lines conduct the evolved vapors direct to pressure blowers and the first stage absorbers.

The storage tanks are also connected to a dry gas return system whereby at times of pressures lower than atmospheric within the tanks, dry natural gas is drawn in instead of air, and at times of internal tank pressure the natural gas is cut off and the vapors evolved from the tanks are directed to the conservation plant.

The refinery conservation or recovery plant consists essentially of vapor gathering lines, low pressure compressors, absorption towers, stills, coolers, interchangers and storage tanks. Recovery of hydrocarbon vapors is effected by subjecting the vapors to series absorption: first, in a heavy treated gasoline; and second, in a heavier absorption oil. The gasoline is enriched by the absorption of light fractions and is marketed directly without further treatment. The process is essentially one of thorough blending—mixing vapors with gasoline—and is carried on at approximately atmospheric pressure and temperature, in order to absorb only such fractions as will remain a liquid at ordinary storage and handling conditions.

The partially treated vapors are then compressed to about ten pounds pressure and subjected to absorption in ordinary recycled absorbent oil. The gasoline content is removed by distillation at atmospheric pressure and the condensate is blended directly in heavier gasoline. On account of the high gas shrinkage due to the re-

Table 2

Composition

	Propane	Iso-Butane	Normal Butane	Pentane Plus
Raw Gasoline	.....	0.53	1.18	98.29
Enriched Gasoline	.....	1.45	5.01	93.54
Second Stage	.....	2.58	15.84	81.58

Vapor Pressure (Beistle & Prather Method)

	@ 70°F.	@ 100°F.
Raw Gasoline	2.1 pounds abs.	3.6
Enriched Gasoline	9.8	12.7
Second Stage	12.6	20.2

Engler Distillation

	Grav.	Init.	10%	70%	80%	90%	Per Cent Max.	Per Cent Rec.
Raw Gasoline	49.1	134	228	336	358	384	435	98.5
Enriched Gasoline	52.2	90	166	332	354	379	431	98.0
Second Stage	70.0	68	88	228	256	313	414	95.5

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moval of gasoline in the first stage of absorption, the quantity of gas treated in the second stage is about half the quantity to the plant and due also to the leaner gas handled, the quantity of gasoline recovered is about one-fourth that recovered in the first stage of absorption. Absorption oil temperatures and rates of circulation may be controlled to effect retention of desirable hydrocarbon fractions.

Residual vapors from the second stage of absorption are burned as fuel. The low pressure of operation in the second absorption stage is used principally to force the gas through the absorbers and on to the point of consumption as fuel.

Table 2 shows the composition, vapor pressure, and Engler distillations of representative samples of gasoline before and after enrichment in the first stage of absorption and also of the gasoline produced by distillation (before blending) in the second stage of absorption.

Vapors remaining after the two stages of absorption are burned as fuel. The quantity of hydrocarbon vapors burned is approximately one-quarter of the quantity drawn from the storage tanks. A representative constituent analysis follows:

	Percentage by Volume
Methane and air	58.9
Ethane	1.61
Propane	15.72
Iso-Butane	9.09
Normal Butane	13.73
Pentane and heavier	0.95

Utilization of partial stabilization in the field, combined, with a refinery recovery system incorporating a selective absorbent feature, has resulted in making possible the economical storage of natural gasoline. Quantities of natural gasoline in the magnitude of one-half to one million barrels are being stored safely and economically in 80,000 barrel conical steel roofed tanks. Quality of natural gasoline is such that cargo shipments can be made safely and economically without unusual precaution to be taken in type of tanker or method of loading. Combination of evaporation loss recovery and storage procedure has resulted in economical operation.

The Superheater Co., New York, has published bulletin T-30, on its Elesco superheaters for oil country boilers, claiming that they reduce drilling costs by reducing amount of steam required, radiation losses, fuel, water and scale formation and speeding up drilling. Results of tests of superheated steam in drilling operations as compared with saturated steam, indicating the above-mentioned qualities, are included.

New Refining Patents

Oil-Cracking Retorts. U. S. P. 1,761,343, June 3, 1930, application filed March 30, 1927; Albert C. Holzapfel.

THE high temperatures prevailing in cracking retorts and the presence of organic vapors and/or steam, either destroy or remove protective paints, even the "water paints" which might withstand cracking temperatures but cannot resist superheated steam.

A composition has now been developed which effectively protects the metal walls of cracking apparatus; it resists both the high temperature and the destructive action of steam and organic vapors. The preferred composition, which may be varied within rather wide limits, contains water glass 45, water 28, magnesite 5, slaked lime 2, fire clay 10 and a white pigment (preferably titanium oxide) 10 parts. Magnesite or lime may either one be used to exclusion of the other, but presence of both is preferred. The fire clay is an essential component, for best results; only a fair degree of protection is obtained without it. The coating when applied is hardened by heating to 900-1000 degrees F.

What Is Claimed

Protecting the inside surface of oil-cracking apparatus with a composition of water glass, water, magnesite, slaked lime, fire clay and titanium oxide, applied and heated to oil-cracking temperature.

* * *

Deodorizing Lubricants. U. S. P. 1,761,151, June 3, 1930, application filed May 29, 1926; 1,761,152, June 3, 1930, application filed Aug. 27, 1926, and 1,761,153, June 3, 1930, application filed Jan. 8, 1927; Arthur E. Pew, Jr., Assignor to Sun Oil Co.

THE invention set forth in these two patents relates to a vapor-removal process and apparatus for removing from lubricating oil distillates any malodorous gases or vapors. The process is for use particularly with continuous oil stills, for example the mercury vapor still patented by Pew and Thomas. In combination with the still and fractionating equipment, a deodorizer is used which withdraws vapor from the fractionating tower at such a level that the fraction withdrawn is relatively light and carries the malodorous gases or vapors with it.

The deodorizer is a rectangular vertical receiver, fitted with inclined staggered flow plates over which the oil is very thinly distributed. The odoriferous gases or vapors escape and are drawn off by a vacuum line; the deodorized oil flows out at the bottom of the deodorizer. Raschig rings or the like may be used to increase the contact area of the liquid surface. The fractionating tower is so designed as to effect a partial deodorization, so that the deodorizer may operate most efficiently. With oil from a mercury vapor still the deodorization is so thorough that no further purifying treatment is required.

What Is Claimed

In an oil distilling apparatus, a fractionating tower having a conduit above the vapor inlet but nearer the bottom than the top and communicating with a deodorizer having gas outlets, a liquid discharge and means for distributing the condensate in a very thin film.

U. S. P. 1,761,152 is a continuation (in part) of 1,761,151, and emphasizes in its specification and claims the process rather than the apparatus.

What Is Claimed

Removing odoriferous gases from a refined oil product by distributing preheated oil over a large surface area and, without application of substantial heat, subjecting it to a degree of vacuum adapted to remove to odoriferous gases without vaporizing the oil.

U. S. P. 1,161,153 covers improvements in distillation apparatus for vacuum distillation of lubricating oils to obtain them free from malodorous constituents. It modifies certain parts of several of the inventor's other patents or pending applications and improves on certain features of these.

What Is Claimed

Producing lubricant distillates free from odor-producing gases by subjecting liquid oil to thermal conditions producing condensible oil vapors containing odor-producing gases, condensing, and distributing the condensate over a large surface area under sufficient vacuum to remove the odor-producing gases.

* * *

Purifying Lubricants. U. S. P. 1,761,328, June 3, 1930, application filed July 31, 1928; Marvin L. Chappell, Assignor to Richfield Oil Co.

A METHOD has been developed for treating viscous lubricating oils in such a way that they do not tend to emulsify with water, steam, alkali solutions or sea water. This has the double advantage of preventing emulsification losses in refining the lubricants, and providing lubricants suitable for use in steam turbines and other machines where the oil will be exposed to water or steam.

(Continued on Page 60)

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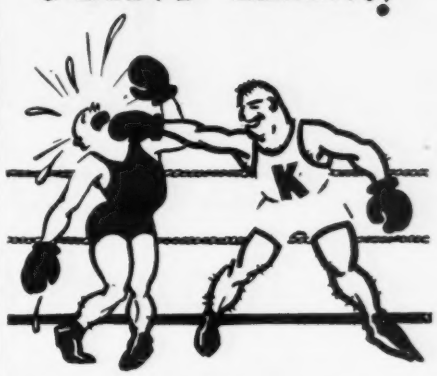

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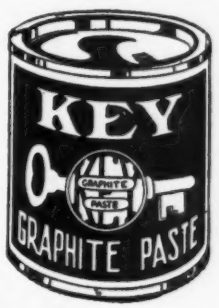

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New Refining Patents

(*Continued from Page 57*)

The invention is especially applicable to asphalt base crudes, which when treated with sulfuric acid yield sulfonic acids and like compounds, which are active emulsifying agents. Removal of these compounds is accomplished, in the new process, by changing the usual neutralization procedure to a 2-stage process of which the first stage neutralizes only the sulfuric and sulfurous acids, so that soaps and salts of the organic and sulfo-organic acids are not formed. Thus emulsification is avoided in the first stage, in which caustic soda is used. In the second stage caustic potash is used and the neutralization is effected under pressure, adding steam as needed. This treatment effectively removes the compounds which would otherwise impart to the oil emulsification tendencies.

What Is Claimed

Purifying lubricants, after treatment with sulfuric acid and separation from the acid sludge, by first neutralizing and separating the free mineral acids, then neutralizing the organic and sulfo-organic acids with potassium hydroxide solution, and finally separating the treated oil by heating with steam under pressure.

* * *

Vapor Phase Cracking. U. S. P. 1,763,608, June 10, 1930, application filed June 15, 1925, Jos. B. Weaver; and 1,763,609, June 10, 1930, application filed June 6, 1927, Jos. B. Weaver, Rodolphe Stahl and Cary R. Wagner, Assignors to Gyro Process Co.

THESE inventions relate to improvements in vapor phase cracking, directed chiefly toward overcoming the difficulties due to carbon deposition in vapor phase cracking apparatus.

In U. S. P. 1,763,608 a novel use is made of a pipe still and expander, in a procedure which involves the use of steam and a conversion reagent in a converter having a series of tubes in which the temperature is successively higher. The conversion reagent, preferably an oxide of iron, made up with a plastic into suitable physical form, is placed in the converter tubes; and the time of treatment is successively shorter as the vapor passes into the hotter tubes. From the converter the cracked products pass into a tar condenser, in which large contact surface is provided by a novel arrangement of jackstones, strung on wires for ease of removal for cleaning.

Based on the discovery that carbon deposition occurs mostly in cooling the vapors from the converter of 1100°F. to about 600°F., sudden cooling to about 450°C. is provided in the tar leg of the condenser by admitting makeup stock at this point. This localizes the carbon deposition, confining it to a place and form which permit easy removal as required.

What Is Claimed

In a vapor phase cracking apparatus, a converter, means for passing oil vapors therethrough at temperatures above 1000°F., a cooler at the converter outlet, an inlet for liquid oil near the cooler entrance to provide quick cooling of the hot vapor to 600°F. or lower, and means for fractionating and condensing the vapor.

In U. S. P. 1,763,609 the improvement consists in controlling the time and temperature conditions so that time of transition through the carbon-forming temperature range is almost negligibly small. This is accomplished by practically instantaneous heating of the oil vapor, and practically instantaneous cooling after cracking temperature is reached. Apparatus is described for the close temperature control which is necessary for this procedure; but the invention is directed to the attainment of temperature conditions which nearly or entirely eliminate carbon deposition, and not to any particular apparatus.

What is Claimed

Cracking oil by vaporizing it under non-cracking conditions, then practically instantly raising the temperature above 1000 degrees F. and immediately on completing the vapor phase cracking, practically instantly cooling the conversion products below 600 degrees F. to halt abruptly the conversion reaction.

* * *

Revivifying Spent Filtering Clays. U. S. P. 1,763,167, June 10, 1930, application filed May 25, 1927; Hugh Lowery, Assignor to Standard Oil Co. of Indiana.

IT HAS been found that spent fullers earth or like filtering clays can be effectively revivified, for use either in a dry or a pulp state, by a suitable treatment with alkali.

For the alkali, soda ash is preferred because it is cheap, but other alkalies may be used. As an example, 140 gallons of 8° Baume soda ash solution is agitated with 600 lb. of spent clay, and heated to 185-210° F. After settling, the clay is separated from the oil and water, and may be washed and dried or not, according to its intended use. The treated clay is substantially as active as the original, and the invention is applicable both to fine clays for contact filtering and coarse clays for percolation filtering.

What Is Claimed

Revivifying filtering clay from mineral oil filtration, by washing with soda ash solution while heating to about 180-210°F., settling, removing oil and liquid, washing, drying and igniting the clay.

ADVERTISING PAGES REMOVED

New Consistometer May Have Wide Use In Testing Greases and Oils

CLEVELAND

A NEW consistometer, which may have a wide application in the study and testing of greases and heavy oils, has recently been developed in the laboratories of the U. S. Bureau of Standards. A description of the apparatus and its uses was published in the April issue of the Journal of Rheology, Easton, Pa., and the greater part of this article is reprinted below for the benefit of NATIONAL PETROLEUM NEWS readers.

According to Ronald Bulkley[1] and F. G. Bitner,[2] authors of the article, who also developed the apparatus, the instrument has two features which are of distinct advantage over other types of consistometers previously developed. One of these features is the fact that the test material may be passed back and forth through the capillary any number of times, it being so constructed that the material under test flows from one reservoir, through the capillary, into another reservoir. From this second reservoir it may then be forced back through the same capillary into the first container.

The second advantage is that only a small quantity of material is required for determination of the rate of flow, which minimizes the effect, on the consistency of the material, of the working incident to the determination as made in many other instruments. The authors state that, in using apparatus which requires the passage of a comparatively large amount of material for a single determination, and with which no other test is ordinarily made on this same batch of grease, neither the worked nor the unworked consistency is found, but an intermediate consistency on material constantly changing and only partially worked. The advantages of the new method are very important in studying substances which show a change of consistency with time, and those which show a breakdown in structure with working.

The authors have concluded that this instrument is:

(1) Speedy in operation, and permits the taking of any number of flow-pressure graphs, without refilling or removing from the bath, at any number of different temperatures.

(2) It can be used to determine both worked and unworked consistencies of the same material, these two properties being most useful in determining the characteristics of plastic materials.

(3) Many oils at low temperatures show the property of thixotrophy, and require a standardized period of cooling to obtain reproducible results.

The authors refer to the results of an unpublished paper by Griffin and McKee of the Bureau who discovered that a plastic oil at temperatures below its pour point does not flow at a steady rate through a capillary, even if the pressure maintained on the oil is constant. The rate gradually increases and finally reaches a steady rate much greater than that first shown. This is explained as being due to a breaking down of the structure of the solidified material before it has reached the entrance to the capillary.

The study of greases, especially, has been more or less handicapped on account of the difficulty of obtaining consistent and reproducible results. This new instrument seems to give promise of solving at least partially some of the difficulties that have been experienced by former investigators, and may prove a valuable addition to the list of apparatus available to the student and manufacturer of greases and viscous oils.

A description of the instrument and its operation, advantages, and sources of error, as prepared by Messrs. Bulkley and Bitner follows:

Description of the Instrument[3]

Referring to Fig. 1, the device shown on the right is a mercury leveling bulb equipped with two stopcocks and with a side-arm of small-bore glass tubing. Since the movement of the mercury surface in this tubing shows the volume of flow of the test material, the volume of mercury per unit length of the tube must be determined.

If clean mercury is employed and if the pressure tubing of the system is of high-grade, sulphur-free rubber, the bore of the glass side-arm may safely be as great as 2.5 millimeters without causing the mercury surface to assume an irregular form. This part of the apparatus is mounted on a clamp stand outside the bath. The side-arm must be accurately horizontal.

The ball float valve *A* serves to prevent the passage of mercury into the consistometer in case of a sudden leak in the apparatus. It is joined to a second horizontal tube and then to a gooseneck with a safety bulb, and is connected by pressure tubing to the

[1]Assistant chemist, Bureau of Standards.
[2]Junior Scientific Aide, Bureau of Standards.

[3]Reprinted by permission of the Journal of Rheology.

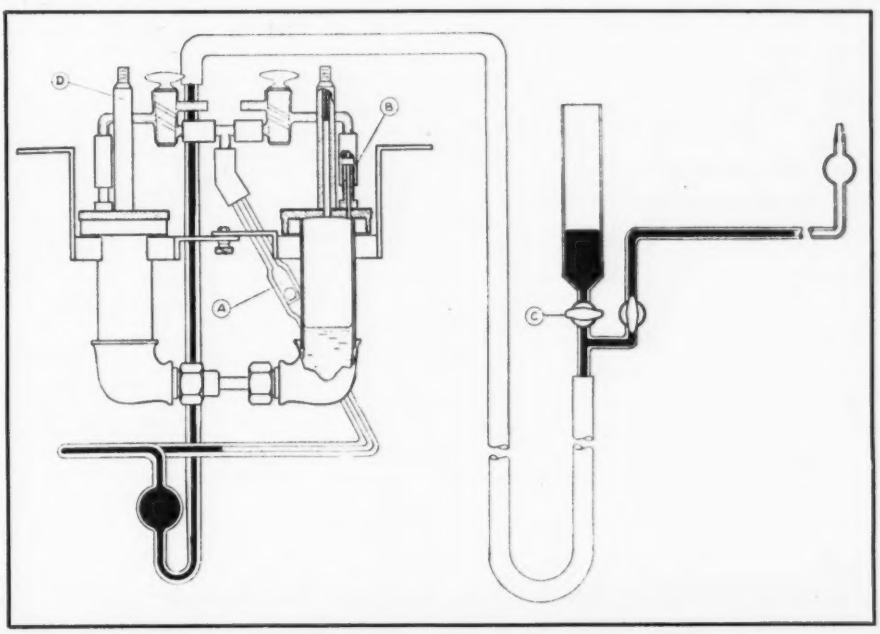


Fig. 1—Schematic Representation of Instrument in Operation

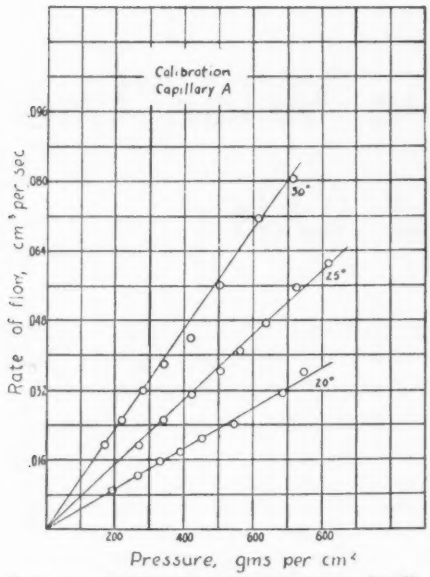


Fig. 2—Calibration Graphs for Capillary A

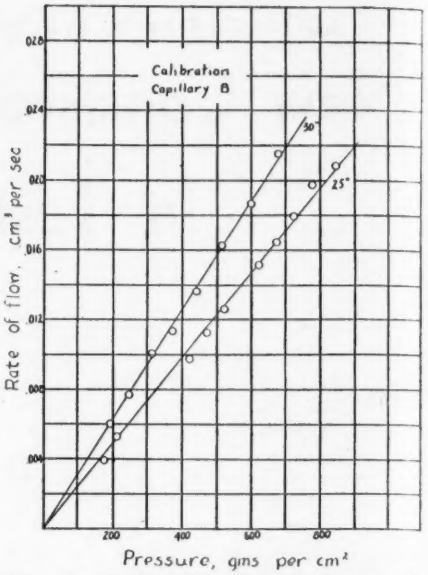


Fig. 3—Calibration Graphs for Capillary B

leveling device outside the bath. Merely to conserve space it is bent at an angle to the horizontal tube below it.

When this tube has been leveled, the frame on which the piece is mounted is clamped rigidly in position in the bath once and for all. The head of mercury effective in producing flow is the vertical distance between the two horizontal tubes, and is measured on a millimeter scale attached to the bath.

The consistometer proper is made entirely of metal. It consists essentially of two similarly constructed reservoirs to contain the test material, joined at the bottom by the capillary through which the flow is to be measured, and fitted with screw covers having suitable outlets for pressure connections. The instrument is hung in the bath by side-arms of brass strap. Similar straps connect the two containers at the top. The capacity of each container need not be greater than 25 cm³.

The capillaries are interchangeable. They are equipped on one end with a rigidly attached hexagonal nut, and on the other with a collar and gland nut which permits ready dismounting and reassembling of the instrument.

Each cover has two openings. The one centrally placed is closed by an ordinary automobile tire valve, while the other is joined through a three-way stop-cock to the mercury float valve.

Manner of Operation

Sufficient mercury is poured into the leveling bulb to fill the pressure system from some point on the lower horizontal tube to a corresponding point on the upper tube as shown in Fig. 1. At higher pressures slightly more mercury will be required than at low pressures, on account of the expansion of the rubber tubing. This adjustment of the mercury volume is very easily and quickly made through the leveling bulb in either direction as desired. Most of the mercury remains permanently in the pressure system for several months or until fouled.

To prevent blowing air through the capillary, and to reduce the total volume of air in the apparatus, slightly more of the test material should be put into the consistometer than the amount required to fill one container. Suppose the left-hand container to be more than half full, and the right one to be less than half full of the material to be tested. The covers are fitted tightly, the instrument is suspended in the bath and connected to the pressure system through the flexible joints *B*.

When all is in readiness for a run, both cocks of the leveling device being open, the three-way cocks above the float valve *A* are turned into such position as to connect both containers of the instrument with *A*. The leveling device is raised sufficiently to give a head of mercury equivalent to the highest pressure desired on the flow pressure graph.

By a tire pump pressure is now applied through either of the tire valves *D*. There will be no appreciable flow of the test material during this procedure, since the air pressure will be equal in both containers, but the mercury in *A* will be forced out and up into the leveling device. When the pressure is just great enough to keep the mercury surfaces in the two horizontal tubes, stop-cock *C* is closed.

Flow of the test material through the capillary is started by relieving the pressure in the right-hand container of the instrument by connecting this container to the atmosphere through its three-way stop-cock. The test material flows through the capillary of the consistometer from left to right. As flow proceeds, the mercury surface in the lower horizontal tube of the pressure system moves to the right, that in the upper tube to the left. Conditions at this instant are depicted in Figure 1.

Since the two horizontal tubes are approximately 2.5 millimeters in diameter, no correction for the surface tension of the mercury is required. The slight pressure resulting from the difference of level of the test material in the two containers may be neglected except in the work of calibration and in such instances as demand the highest accuracy.

The volume of flow of test material is equal to the volume of mercury displaced after the run has commenced. The rate of flow is therefore calculated by timing the motion of the upper mercury surface along a scale mounted behind the side-arm. The volume of flow for one point on the flow-pressure graph need not be greater than 0.5 cm³ to procure ample accuracy of measurement.

After the time reading has been taken, the run is allowed to proceed while the head is being measured and while the data are being recorded. To obtain a reading at a second pressure, it is not necessary to use the pump again or to disturb the setting of the stop-cocks. The leveling bulb is simply lowered to such a position that the mercury surfaces are again in the proper portions of the horizontal tubes, when the frame is again clamped into position and the rate of flow again timed.

By the above procedure data for a great many points are obtained very speedily. If the air pressure in the system is partially relieved between runs by manipulating one of the three-way stop-cocks, greater decrements of pressure result. This method of operation is perhaps preferable to the first, since a much greater range of pressures may be covered in a given length of time.

Data for the first flow-pressure relation having been obtained, those for any number of others at the same temperature or at other temperatures may be obtained by forcing the material back and forth through the capillary, taking readings as the material flows in either direction.

If the material is a simple viscous liquid or if no concern is felt as to a possible breakdown in structure with working, the time required to establish thermal equilibrium before commencing the first run may be greatly lessened by forcing the material through the capillary with the pump. During this procedure the float valve *A* is cut out by the appropriate stop-cock to permit the use of higher pressures. As the material passes through the capillary it is exposed to its environment in a thin stream, and in only one or two passages it has all acquired the proper test temperature.

Calibration of Capillaries

A method which is frequently employed for the calibration of the diam-

eter of large capillary tubes such as are ordinarily used for plastic materials is the direct microscopic examination of the ends of the tubes. This method, however, involves the somewhat doubtful assumption that the mean of the observed diameters of the two ends is the true effective diameter under conditions of flow.

A more reliable method[5] consists in calculating the true effective diameter from the results of flow tests with liquids of known viscosity. This procedure seems particularly commendable in the present instance where it is desired to check not only the diameter of the capillary, but also the general performance of the apparatus as a whole.

Figures 2 and 3 show flow-pressure graphs for two capillaries for mineral oils whose viscosity at the different temperatures had been determined on a Bingham viscometer. The general accuracy of the data may be inferred from the manner in which the points fall upon a straight line passing through the origin. From the slope of each graph the diameter of the capillary may be calculated and compared with the diameter as measured directly. Since the kinetic energy correction is negligible here we write from the ordinary equation for viscous flow.

$$d^4/l = \frac{128\,n}{\pi\,g}\left(\frac{q}{p}\right)$$

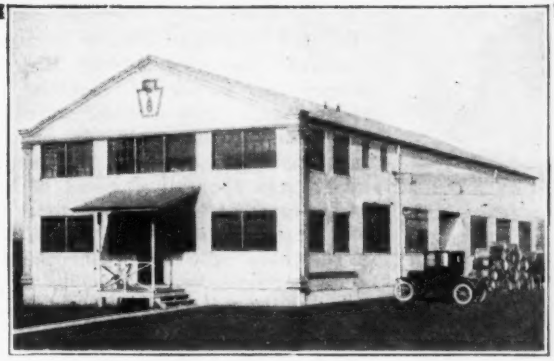
where n = viscosity in poises,
d = diameter of capillary, cm,
l = length of capillary, cm,
g = acceleration of gravity, cm/sec.^{2},
q = rate of flow, cm^3 per sec.,
p = pressure difference producing flow, g per cm^2.

The quotient, q/p, is obtained directly from the diagram as the slope of the flow-pressure graph.

The agreement between values of d^4/l as calculated from different graphs for the same capillary is an index of the dependability of the apparatus and general procedure. The following table shows the agreement which is obtained between values of this quotient as calculated from flow tests and from direct measurement. The values calculated from the graphs are considered the more reliable and have been used in later work. All of the data for the three graphs of Fig. 2 were obtained without removing the instrument from the bath. The same is true for the two graphs of Fig. 4.

	Capillary A			Capillary B	
	20°C	25°C	30°C	25°C	30°C
Viscosity of oil, poises	49.7	30.7	19.5	0.560	0.429
$q/p \times 10^5$	4.61	7.41	11.4	2.44	3.12
$d^4/l \times 10^7$, calculated	952	945	924	5.68	5.56
Ave. $d^4/l \times 10^7$, calculated		940.4		5.620	
Measured length, cm		7.54		7.39	
Measured diameter, cm		0.163		0.0445	
$d^4/l \times 10^7$ from meas. diam. and length		936		5.31	

[5] Herschel and Bulkley, "Calibration of the Buret Consistometer," *Ind. Eng. Chem.*, 19, 134—139 (1927).



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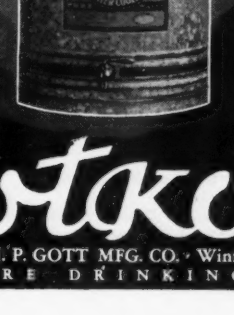

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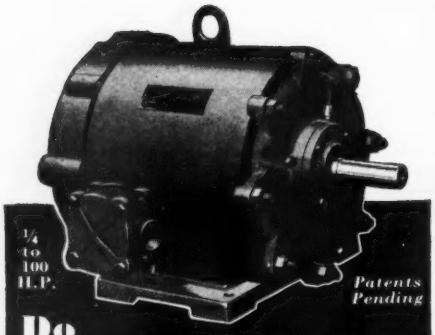

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Some Advantages of the Instrument and Some Sources of Error

Of the various devices commonly employed for determining the consistency of a plastic material, the capillary-tube type of instrument has been more thoroughly investigated than any other, both experimentally and from a theoretical point of view. Many forms of this type of instrument are in use, but practically all of them are suitable only for such materials as show no change of consistency either with time or with mechanical working.

F. L. Browne and Don Brouse[6] have emphasized the importance of the change of casein glue with time, and have shown the limitations of the Herschel consistometer for this kind of material. The same disadvantages are inherent in Bingham and Green plastometer of which the Herschel instrument is a modification. In a later paper Brouse[7] has also mentioned the necessity for testing over a wide range of temperatures.

For the above instruments a period of two hours in the bath is required after each change of temperature for the material to acquire the temperature of test. Casein glue is only one example of a great variety of substances which show a more or less rapid change of consistency with time, and flow-pressure graphs of other plastic materials are frequently desired at several temperatures.

While the ideal instrument "with which measurements of flow under several different pressures can be made simultaneously" is not realized in the present case, the consistometer used by the present authors nevertheless does permit the worked material to be brought in a few minutes to the test temperature, and data for five or six points on a flow-pressure graph can then be obtained in approximately the same time as required for a single point by the instrument Browne and Brouse employed.

Theoretically an instrument equipped with a flowmeter, after the manner of Henry Green,[8] gives an instantaneous reading of the rate of flow. Practically, however, this offers very little saving of time in procuring data because of the relatively large amount of time which must still be used in taking readings, adjusting the pressure, etc.

The calibration of a flowmeter of the Green type is laborious, and a separate thermostat for the flowmeter is desirable if not utterly essential where tests are to be conducted at more than one temperature. The calibration of the horizontal measuring tube of the present instrument is exceedingly simple, and the readings of rate of flow are obtained in a short enough period of time to make the instrument satisfactory for the testing of rapidly changing materials as well as materials which break down in structure with working.

P. M. Giesey[9] and S. Arzoomanian have described a modification of the simple buret consistometer whereby the principle of the latter instrument may be applied to stiff substances such as greases and dental pastes. The material used by these investigators possessed "some structure," and on making a check run on material which remained in the instrument from a previous determination they found an increase of 50 per cent in the mobility.

This very considerable change in consistency had evidently been produced by mechanical working of the material in the container of the instrument while the first run was proceeding. Presumably a much greater breakdown of structure would have been noted had the material been tested again after its passage through the capillary where the shearing is much more severe than in the container. The indications are, therefore, that the first run certainly and the check determination perhaps were both made on material which was constantly changing. In this event neither run truly represents the consistency either of the unworked or the thoroughly worked material.

This instance is cited not as a criticism of a particular investigation but merely as an example of the practice, which has been more or less common in the past, of submitting a material possessing structure to a single passage through the capillary. The results of such a procedure are usually of little practical value, since, in general, either the unworked or the thoroughly worked consistency is desired. Thus when starting an engine in cold weather, if the oil is congealed in the feed lines and bearings, its unworked consistency is of paramount importance. After a few minutes' running, however, the structure of the oil is completely broken down and the worked consistency is desired. The consistency in an intermediate condition is of little significance.

For many materials this breakdown of structure is of course well recognized, and, in the case of greases, the American Society for Testing Materials[10] has tentatively specified a definite procedure for working the material before test. The structure may be present in many other materials, however, where its existence would remain unsuspected unless tested for directly. It is known to develop in

[6] "The Consistency of Casein Glue," *Colloid Symposium Monograph*, 5, 229-242 (1928).

[7] "Consistency of Animal Glue," *Ind. Eng. Chem.*, 21, 242-247 (1929).

[8] "Further Development of the Plastometer and Its Practical Application to Research and Routine Problems," *Proc. Am. Soc. Test. Mats.*, 20, Pt. 2, 451-494 (1920).

[9] "A New Rapid Extrusion Plastometer," *Colloid Symposium Monograph*, 5, 253-258 (1928).

[10] "Tentative Method of Test for Penetration of Greases," *Proc. Am. Soc. Test. Mats.*, 26, Pt. 1, 834-839 (1926).

certain paint pastes,[11] and in enamel slips containing a small percentage of clay if these materials are allowed to stand undisturbed for some time after working. As will be shown later oils which have become plastic at a low temperature also manifest this behavior. The same phenomenon has been observed in the case of many other colloidal systems by Freundlich[12] and has been called by him, thixotropy.

Strictly speaking, the experimental determination of the unworked consistency of a plastic material is an impossibility. It is conceivable that some method of testing could be devised whereby the unworked consistency could be approximated through a backward extrapolation. A more practical expedient and one which gives a sufficiently accurate approximation for many purposes is to make several observations of the rate of flow over a range of pressures by the passage of only a small amount of material through the capillary. As shown by Giesy and Arzoomanian and as will be shown here later, the breakdown of structure in the container is often so great that when several grams of material are passed for a single datum point even an approximation of the unworked consistency is impossible.

If a material increases in stiffness only slowly after working, its thoroughly worked consistency may be determined at room temperature on practically any of the instruments commonly employed. When the plastic properties exist largely as a result of cooling, however, as in the case of a frozen oil or gelatin, the broken down consistency in the cooled condition can be measured only with an instrument in which the material is maintained at the test temperature continuously while being worked and tested. The effects of any working received by a plastic oil at 0°C, for instance, are completely destroyed by exposing the oil to the temperature of the room while weighing the oil and returning it to the consistometer as must be done in the Bingham instrument and its various modifications.

The instrument herein described is well adapted for the purpose of determining the consistency of plastic materials in general, and more particularly for the special materials considered in this section. It is also suitable for the determination of the viscosity of true liquids which are too opaque or too viscous to be handled readily in viscometers of the Ostwald or the Bingham type.

At the present time there is a great dearth of instruments with which viscosities higher than 30 or 40 poises can be measured to an accuracy of 5 per cent without an excessive consumption of time. With the present instrument the rapid measurement of viscosities of several thousands of poises to an accuracy of ±2 per cent is entirely feasible.

The chief source of error in the instrument is the change of volume which is brought about in the air in the system by a change either of temperature or of pressure. Since the volume of flow which is measured is small, a given percentage change in the volume of air during a test produces a relatively large percentage error in the observed rate of flow.

As a numerical example, if the total volume of the air in the apparatus is 20 cm³, and if the head of mercury producing flow is 24cm, then for a volume of flow of 1 cm³, a change of pressure of 1 millimeter of mercury will result in a 2 per cent error in the observed rate of flow if the change takes place during the timed interval. Similarly, a change of temperature of 0.1°C during a timed interval produces an error of about 0.8 per cent in the observed rate of flow.

This emphasizes the necessity for using great care in leveling the horizontal tubes and in accurately controlling the temperature of the bath. It also indicates the desirability of having the volume of air in the system as small as practicable.

[11] H. L. Beakes, "Settling of Pigments in House Paints," *Ind. Eng. Chem.*, 21, 1118-1121 (1929).

[12] H. Freundlich and L. L. Bircumshau, "Thixotropic Behavior of Aluminum Hydroxide Gels," *Kolloid-Z.*, 40, 19-22 (1926).

New Patents

Prepared by R. E. Burnham, patent and trademark attorney, 1343 H Street, N. W., Washington, D. C., from whom copies may be obtained at the rate of 20c each. State number of patent and name of inventor when ordering.

June 17, 1930

PRODUCTION

Pump and method of packing the same—Roscoe W. Stephens, Los Angeles, and Charles E. Wilcox, Anaheim, Cal. Filed July 16, 1927. No. 1,764,364.

Combination expansion mill and underreamer—Lennie Wells and Oliver W. Eckstein, Long Beach, Cal. Filed June 29, 1925. No. 1,764,373.

Well-boring bit — Fred L. Bronson, Los Angeles, Cal. Filed Feb. 24, 1925. No. 1,764,432.

Liquid-pump—Bernard H. Scott, Glendale, and Samuel E. Ross, Long Beach, Cal., assignors to Scott-Ross & Co., Los Angeles, Cal. Filed July 20, 1926. No. 1,764,473.

Combined fishing and swaging tool—Albert B. Watkins, Los Angeles, Cal. Filed May 29, 1929. No. 1,764,481.

Fluid-operated pump—Paul F. Yungling, Los Angeles, Cal., assignor to Scott-Ross & Co., same place. Filed March 20, 1928. No. 1,764,482.

Floating supporter for drill-pipe — John A. Zublin, Los Angeles, Cal. Filed April 22, 1929. No. 1,764,488.

Pump — Arthur B. Steen, Houston, Tex., assignor to Texas Co., New York, N. Y. Filed July 31, 1926. No. 1,764,-657.

Device for preventing abrasion between drill-pipes and surrounding well-casings—Walter T. Woods, Long Beach, Cal., assignor to Byron Jackson Co., San Francisco, Cal. Filed Feb. 17, 1928. No. 1,764,769.

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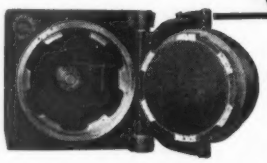

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Pennsylvania Approves Oil Container When Filled at Warehouse

CLEVELAND, July 31

PENNSYLVANIA has approved the sale of motor oil at service stations in sealed glass containers, which are dispensers and not measures, when the container is filled away from the station.

New York is still unsettled on whether the glass container is a dispenser as well as a measure, but expects to decide after vacation.

Officials of most other states have not yet passed on the resolution adopted at the recent conference on weights and measures at Washington to the effect that glass bottles used as dispensers at stations should conform to the specifications of the conference code for measuring bottles.

The question came before the state officials because of several large oil companies using a glass container for station oil sales. The bottle is delivered, filled and sealed, to the station, and termed by the oil companies a container and not a measure. Then the National Conference on Weights and Measures took notice of the bottle containers, and in conference June 3 in Washington adopted a resolution condemning the container as an instrument of possible fraud and deception on the public, except where it conformed to their specifications.

Several states reported following recommendations of the Conference. But this apparently applies to specification of bottle measures at stations as amended at the June conference. The condemnation of bottle containers was a resolution, not a change in the measure code.

Pennsylvania has ruled that, as long as the container is filled when delivered to the station and returned to the warehouse for re-filling, it is a container. The state is concerned only with the fact that the bottle contains the quantity attributed to it, the same as any other package commodity. In case the container was re-filled at the service station it would be classified as a measure and the bottle would have to comply with the specifications set up by the Conference.

Pennsylvania made this decision about six months ago, said Albert B. Smith, director of the department of internal affairs.

In New York state the question has been raised, and Charles J. Reynolds, director of the bureau of weights and measures, is expected to give a decision on his return from a vacation. Oil has not been sold in containers in Michigan so no ruling has been made, advises L. P. Strong, chief of the division of weights and measures.

Retailing motor oil, in glass containers, has been in practice for about three years. When the Pure Oil Co. and the Standard Oil Co. of Pennsylvania began distribution at their stations in tall, slender bottles the state weights officials were aroused as to whether the bottle should come under their specifications of a glass measure.

Late in 1928 a Georgia oil company began oil distribution in bottles. The basic idea was to obtain distribution for the jobber's own brand in new outlets, such as country stores, where storage in drums would not be advisable. The bottle was short, and of comparatively large diameter. This merchandising method was reported in NATIONAL PETROLEUM NEWS, Feb. 6, 1929, page 91.

Shortly afterwards an Indiana jobber began distributing nationally advertised oil in the same type of bottles. This company's idea was to provide nationally advertised oil brands to stations and other outlets desiring this merchandise but not in a position to stock drum lots of the various grades and brands. The oil was purchased from the refiner and re-bottled in quart and gallon containers. This method was reported in

NATIONAL PETROLEUM NEWS, Dec. 12, 1928, page 106.

For several years the Pure Oil Co. has been studying the use of glass containers and within the past year has expanded its outlets handling containers from a few test territories to widespread distribution. The Standard Oil Co. of Pennsylvania, the marketing subsidiary in Pennsylvania of the Standard Oil Co. of New Jersey, is distributing oil in glass containers in Pittsburgh.

The bottle used by the Pure and Standard differs from the customary oil bottle, in that it is about 15 inches tall, and only a few inches in diameter. These bottles are longer than any previously made, and special problems in manufacturing such bottles had to be solved.

This new type bottle is not presented as a measure. It is considered by the oil companies as a container, just as other commodities are sold in sealed packages.

The National Conference on Weights and Measures takes exception to the container as it exceeds in height and in lack of capacity markings their specifications for bottles for measures.

Because the oil is delivered to the crankcase by the attendant, and not delivered to the customer as with other package commodities, the resolution disapproves the container.

European Business Poor to Fair

Philadelphia. — Business in Europe is only fair, inclining to poor in some parts, Major Aaron E. Carpenter, first vice president of E. F. Houghton & Co., manufacturer of industrial oils, said upon his return from France, Germany, Poland, Russia and England.

Business conditions in France and Poland, Major Carpenter said, were fair, in Germany rather poor, in Great Britain uncertain, while Russian industries are improving.

The Houghton company operates an oil compounding plant in Magdeburg, Germany, and has a distributor in France. It will build a small plant in England soon, L. E. Murphy, president, having sailed for that country recently to decide on a site.

Extra Profits *for the* Oil Jobber!

HUNDREDS of jobbers throughout the country are marketing Freedom refined motor oil under their own brand name. In each case they're pocketing extra profits because of repeat sales and fatter margins.

The demand for 100% Pennsylvania motor oil is becoming stronger each year. Scientific data plus the testimony of motor experts are making it increasingly difficult to sell the motorist anything else.

We'll make up any grade of motor oil (Sharples Process) according to your own specifications. Or we'll gladly recommend oil of specifications that have been thoroughly tested by this half-century-old refinery.

Whether your requirements call for tank cars, compartment tank cars or drums, we'll fill your order with equal dispatch. Meanwhile, ask us for prices.

Guaranteed 100% PURE PENNSYLVANIA OIL

Permit No. 3

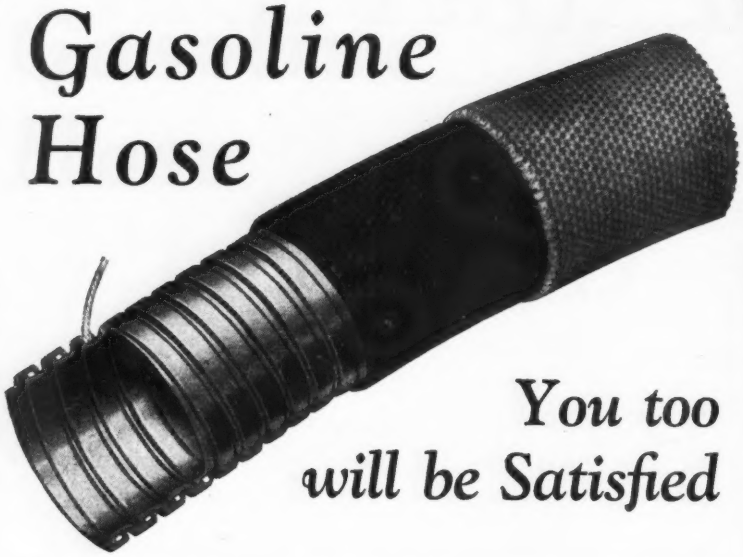
THE FREEDOM OIL WORKS CO.
FREEDOM, PA.
Refineries at FREEDOM and CORAOPOLIS, PA.

Also available for immediate shipment

140/150 Viscosity Sharples Bright Stock
85/90 Viscosity Sharples Bright Stock
100% Pennsylvania Neutrals
600 Steam Refined
650 Steam Refined
600 Flash Steam Refined
630 Flash Steam Refined
Freedom Filtered Kerosene Oil

FO 504

Continental Gasoline Hose



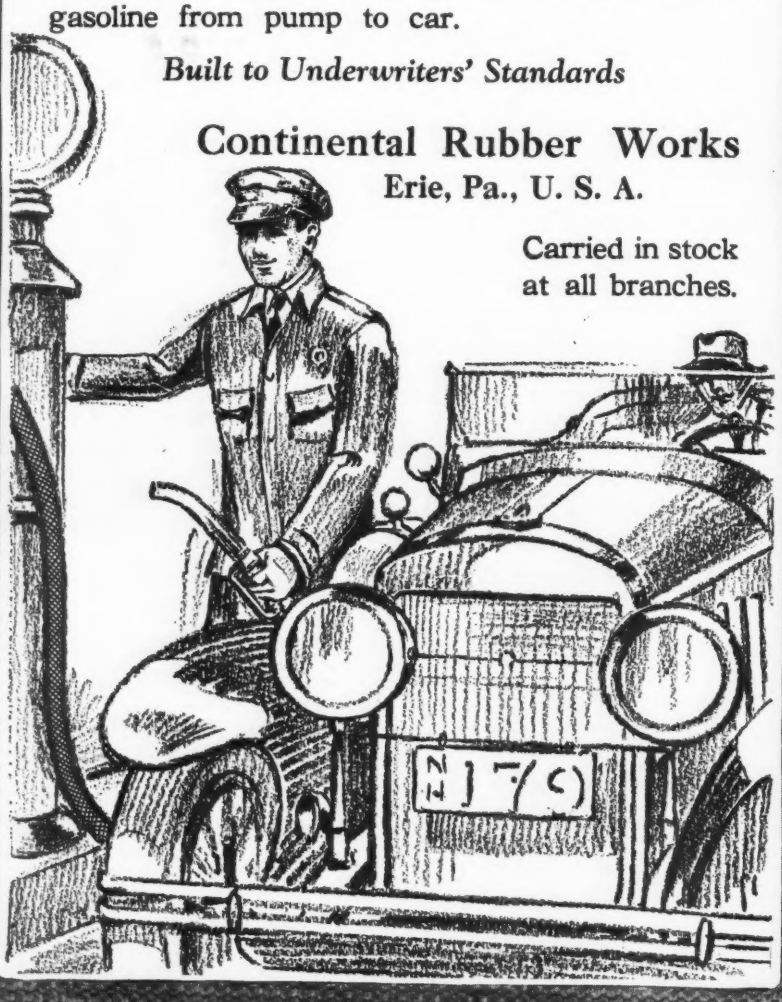
You too will be Satisfied

If you use *Continental Gasoline Hose,* with the wall of metal-rubber-fabric and heavy, cast, brass non-leak castings, assuring full, steady flow of gasoline from pump to car.

Built to Underwriters' Standards

Continental Rubber Works
Erie, Pa., U. S. A.

Carried in stock at all branches.



New Stations Building

Note: Material used in this column is taken principally from newspapers. NATIONAL PETROLEUM NEWS assumes no responsibility for its accuracy. Headquarters of companies and addresses of individuals are given wherever possible.

The list as published from week to week cannot be looked upon as indicative of the relative extent to which stations are being built in various parts of the country.

Service Stations

Columbus, O.—Ohio Stations, Inc., Buckeye Building & Loan Co. Bldg.

Madison, S. D.—Penn-American Oil Co., 430 Oak Grove St., Minneapolis.

Sylvan Grove, Kan.—Louis Beverly.

Wamego, Kan.—Skelly Oil Co., Skelly Bldg., Tulsa.

Emporia, Kan.—Sinclair Refining Co., Conway Bldg., Chicago.

Columbus, O.—Standard Oil Co. of Ohio, East Ohio Gas Bldg., Cleveland.

Palm Beach, Fla.—Colonial Service Station Co.

Tampa, Fla.—Victor Licata.

Creston, Ia. — Continental Oil Co., Ponca City, Okla.

Independence, Ia.—Paul Kingsley, Cedar Rapids, Ia.

Minneapolis, Minn.—F. E. Weisberg, 646 McKnight Bldg., Minneapolis.

Rochester, Minn.—The Home Oil Co., Kensington, Minn.

Kansas City, Mo.—White Eagle Oil & Refining Co., Federal Reserve Bank Bldg.

Galveston, Tex.—Shell Petroleum Corp., Shell Bldg., St. Louis.

Alta, Ia.—White Eagle Oil & Refining Co., Federal Reserve Bank Bldg., Kansas City.

Corning, Ia.—Standard Oil Co. of Indiana, 910 S. Michigan Ave., Chicago.

Stuart, Ia.—Otto Grunwaldt.

Craig, Ia.—The Farmers' Co-Op. Oil Co., Dennison, Minn.

DeWitt, Ia.—H. C. Peters.

West Liberty, Ia.—Shell Petroleum Corp., St. Louis.

Bloomer, Wis.—George Schlenk.

Pittsfield, Mass. — Caanan (Conn.) Motors, Inc.

Olin, Ia. — Phillips Petroleum Co., Phillips Bldg., Bartlesville, Okla.

Union, Ia.—White Eagle Oil & Refining Co., Federal Reserve Bank Bldg., Kansas City.

Jefferson City, Mo.—Henry Kaiser.

De Soto, Mo.—Phillips Petroleum Co., Phillips Bldg., Bartlesville, Okla.

Ashland, Kan.—Sinclair Refining Co. Conway Bldg., Chicago.

Adel, Ia.—Standard Oil Co. of Indiana, 910 S. Michigan Ave., Chicago.

Tulsa, Okla.—Specification Motor Oil System of Oklahoma.

Larned, Kan.—The Texas Co., Chrysler Bldg., New York City.

Versailles, Mo.—Egdorf & Shelton.

Norwich, Kan. — Phillips Petroleum Co., Phillips Bldg., Bartlesville, Okla.

Brookfield, Mo.—Skelly Oil Co., Skelly Bldg., Tulsa.

Westville, Okla.—N. L. Williams.

Red Oak, Ia.—White Eagle Oil & Refining Co., Federal Reserve Bank Bldg., Kansas City.

Aitkin, Minn.—Independent Oil Co., Winnebago, Minn.

Nashua, Ia. — A. B. Stanley, Des Moines.

Ottumwa, Ia.—Mid-Continent Petroleum Corp., Cosden Bldg., Tulsa.

Remsen, Ia.—H. S. Wilberding & F. Johanning.

Albia, Ia.—Continental Oil Co., Ponca City.

Know Cost of Products by Stations To Find Unprofitable Outlets

By Charles Gillespie*

APPROXIMATELY 55 per cent of all monies taken in by large marketing companies represent cost of products sold.

If therefore, the method of establishing the cost of these products is in error, the profit is wrong at the start and no amount of attention to the preparation of the other elements affecting this profit will make up for this error. The final result will still be wrong.

No one method can be developed that will fit the needs and requirements of every company, yet the fundamental principles must be predicated on the desire to arrive at a cost that will truly represent the cost of the products to be sold, which should consist of the purchase price of the stock plus the cost of laying these products down at the point of selling.

There are many ways of pricing products sold and possibly the one most universally used is on the divisional basis. That is, all stocks in the grouped territory of an operating division are separated into product groups such as premium gasoline, gasoline, kerosene, fuel oil, lubricating oil—by various grades — grease — by various grades—and to these separate accounts are charged all purchase invoices and freight charges to destination, dividing the gallonage received into the total amount to arrive at an average cost per gallon.

The agent's actual inventory at the end of the month is multiplied by this average cost per gallon and the total deducted from the divisional groups leaving the difference between what was on hand at the first of the month plus receipts less on hand at the end of the month as representing cost of products sold for the month.

This method is reasonably satisfactory, but like other methods it has its disadvantages.

It depends on an unchecked agent's inventory for establishing the cost of products. Any error in this inventory will affect the cost of products sold and monthly profit accordingly.

It also necessitates converting all stocks on hand to the unit basis without regard to the fact that many stations may not have had sales in several classes of stock during this period.

These are the major objections, and yet if the method of accounting does not require profit by stations, this is possibly the most satisfactory method.

*Accountant, Phillips Petroleum Co., Bartlesville, Okla.

Third Marketing Accounting Article

THIS is the third of five articles prepared for NATIONAL PETROLEUM NEWS by Charles Gillespie on accounting problems of marketers.

Other subjects in the series are on handling of state gasoline tax, and station auditing.

The first article, on a method of handling coupon books redeemed, was published in the July 23 issue, page 97. The second article, on a method of distributing truck and car operating costs was published in the July 30 issue, page 99.

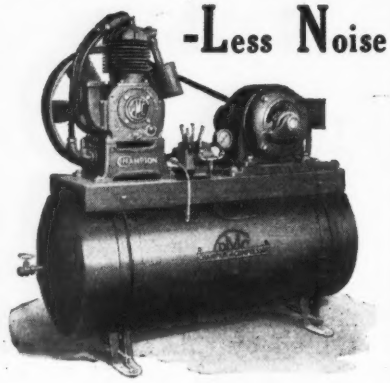
COST LEDGER—

CITY_____

Date	Vr. No.	Description	Premium Gasol'e		Gasoline		Kerosene		LubricatingOi ls		Greases		TOTAL	
			Gals.	Amount	Gals.	Amount	Gals.	Amount	Gals.	Amount	Gals.	Amount	Gals.	Amount

Specimen of cost ledger showing gallons and amount for various merchandise for posting purchase invoices affecting stock and vouchers carrying freight charges

MORE AIR POWER -Less Noise



CHAMPION design—CHAMPION quality construction—give you HEAVY-DUTY POWER without noise—without the usual vibration that wears out equipment. With CHAMPION Ball Bearing Air Compressors you are assured of AMPLE power for operating air lifts, greasing systems, etc., as well as for inflating ALL sizes of tires.

Model "OE-41"
Two Stage Air Compressor

Especially recommended where high pressure is required. Operates continuously to 200 lbs. without overheating. 3 h. p. motor. 60 or 80 Gallon Tank. 12 cu. feet displacement. Low operating cost. Long-lived.

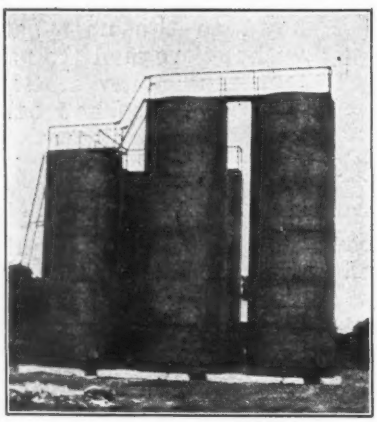
Annular Ball Bearings used as Main Bearings because—

They never need adjustment.
Insure quiet operation.
Reduce vibration.
Require less lubrication.
Require less power to operate.

Write today for catalog information on complete line of CHAMPION equipment.

CHAMPION PNEUMATIC MACHINERY CO.
8168 South Chicago Avenue
Chicago, Illinois

FIFTY BULK PLANTS



INSTALLED AS EASILY AS ONE

Complete Bulk Plant Construction Programs Handled by Leader.

LEADER IRON WORKS, INC.
2112 NORTH JASPER STREET,
DECATUR, ILLINOIS

If the individual profit is desired by stations, it is more accurate to calculate the cost of products sold direct than from the cost of inventory—from unchecked agents' figures. Certain stations are greatly handicapped by adverse freight rates, and if stocks are priced by stations the result will set forth this condition.

By being able to visualize the cost of products for each unit, it may be found desirable to lease or close a station, or to purchase products from points where the freight rates are more favorable. In other words, it gives a better control of one of the places in marketing upon which may hinge the whole question of being able to make a profit or not.

There is no doubt but what the cost of pricing products by stations is more costly, but by grouping certain products of a class that the prices are fairly permanent, such as various grades of lubricating oil or various grades of grease, much of the detail can be eliminated and yet a fairly accurate cost maintained even of these products, while the cost of light oils and more variable stocks can be most accurately maintained.

A cost ledger should be carried by cities—all stations within that city having the same cost with the exception of drayage from the bulk plant to the individual service station—this ledger to show gallons and amount and to which should be posted all purchase invoices affecting stock and vouchers carrying freight charges.

Each city sheet to be divided under appropriate groups, such as premium gasoline, gasoline, kerosene, gas oil, lubricating oil, alcohol, greases and other groups if desired, such as the accompanying specimen:

When the vouchers are all posted, the various columns totaled and accumulated with the brought forward figures of the previous month, divide the gallons into the value by-product groups which will give the average cost of products.

If the policy is to establish individual profit by stations the sales will have been assembled by stations preserving the same product groups as used in the cost ledger. It will then be a question of multiplying the gallons sold at each station with the average cost as established by product groups in that same city to arrive at the cost of products sold.

The cost of products ledger can be consolidated with the stock ledger as a control by stations and may be utilized as an aid to balancing the grouped stations within a city on the stock ledgers.

The gallons sold as well as the cost of these products sold, audit adjustments, and outages will also have to be posted to this cost ledger. Transfers from bulk to service stations in the same city will not affect this account as they do not change the city totals.

No provision is made here for cartage or transfer of products from the bulk to the various service stations. The expense of this service is really a credit to bulk stations expense rather than a credit to their cost of products and should be so set out.

It will be found satisfactory to set this figure out as a separate item of expense also on the service station operating statement rather than a charge to cost of products sold. Otherwise, an erroneous estimate of the transfer cost would distort the products cost figure. It will prove satisfactory to use an arbitrary figure to cover this cartage of 1 cent per gallon.

MonaMotor Buys Semi-Trailer

COUNCIL BLUFFS, IA.—A new International three-ton truck and Fruehauf trailer has been purchased by the Mona-Motor Oil Co. here to haul gasoline and other petroleum products from the company's refinery at Omaha to dealers and company service stations.

Capacity is 2000 gallons. This semi-trailer is designed so that additional trailers can be attached.

Imports of gasoline by France, which had dropped to 2,182,700 barrels in 1928, rose to 15,738,000 barrels in 1929. In 1927 she imported 10,244,000 barrels.

P. & M. Oil Co.'s service station in Galesburg, Ill., employing four workmen and four service boys. Service is the station's business, not its motto, claims Lee H. Morgan, manager

Station Is Busy Enough to Employ 4 Attendants, 4 Service Boys

GALESBURG, Ill.

LEE H. MORGAN, manager of the P. & M. Oil Co., built a three pump service station on a none too well located corner in Galesburg, Ill., against the advice of his friends.

They reasoned there were already too many filling stations in Galesburg for another to hope to be successful. They showed Mr. Morgan, by cold mathematics, that he couldn't get enough business to justify the investment. But Mr. Morgan said that he believed he could get more than his share if he gave a little more service. His sales have proven that his reasoning was correct.

There are 6100 cars and trucks registered in Galesburg. Taking an estimated gasoline consumption of 500 gallons per vehicle yearly, Galesburg's annual business is 3,050,000 gallons, an average of 254,166 gallons a month. Inspection figures show this to be correct approximately.

There are 90 service stations in Galesburg. If the business was divided equally, each would sell 2824 gallons a month. There are also several garages selling gasoline and oil, but just assume that they sell no gasoline, so putting the average at 3000 gallons a month is high.

Mr. Morgan is selling over 10 times as much as he is entitled to by the law of average. Here are his sales as taken from his office records and oil inspector's reports, verified by his supplying company's invoices:

Year	Total Gallons	Monthly Average
1928	333,654	27,804
1929	341,892	28,491
1930	161,420 (5 mos.)	32,284 (5 mos.)

In 1929 Mr. Morgan sold 302 barrels of lubricating oil through this one station. From all indications he will beat that this year. He greased 6747 cars in 1929. The station sells nothing but gasoline, oil and grease, except alcohol in the winter.

How does he do it, most oil men would ask. The answer, in brief, is service.

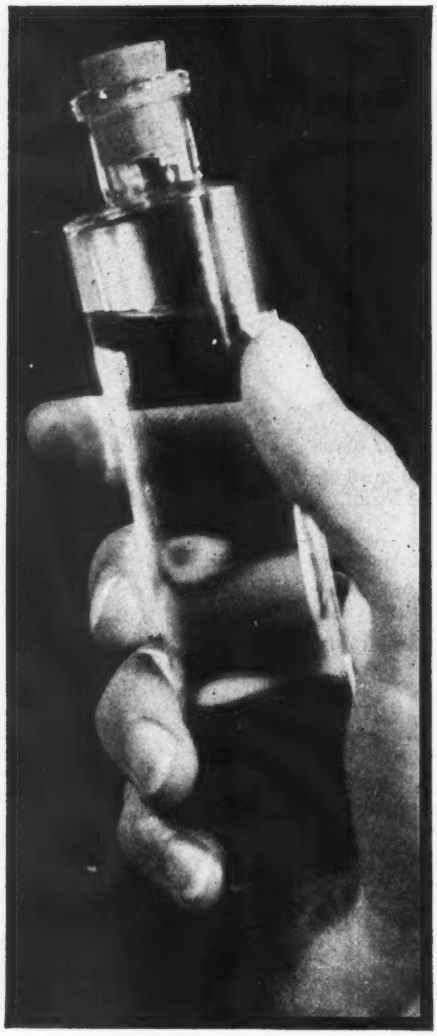
Mr. Morgan has some definite ideas about service, and has the ability to execute those ideas. His service starts with the hir-

"ONE thing I do want to say is that any measure of success that I may have attained is not due to my own efforts but to a combination of circumstances and the complete co-operation of every member of our organization.

I believe that our nice increase this year, in face of increased competition and more cut prices, is due largely to the fact that we started handling Ethyl gasoline the first of the year. It seems like there is a definite and increasing demand for it.

And another thing—The things that we do here we don't set up as a panacea for the other fellow's ills. We know that they will work for us because we have tried them out but they might not work for the other fellow at all. I feel that if I would try to operate some of the fine big super service stations that I see around me that I would be an utter failure but I am egotistical enough to believe that I do know how to run our own little one. You know a fellow ought to know something and I don't know anything else.

I am in very much the same position as the old German farmer who had 14 children—I wouldn't sell this one but I wouldn't give a penny for another one."—LEE H. MORGAN.



"Show Windows"
for
Your Oil

There's a carefully considered reason for every feature of Owens-Illinois Oil Sample Bottles. From the limpid clearness of their perfume bottle glass—handblown to insure thinness—to the exact angle of the side walls, no pains are spared to give the utmost in display to the oil itself.

You will notice that the bottoms of these bottles are blown with particular care, since these are the real "show windows" of your oil. And if you examine the top and finish, you will realize that they are shaped to insure the best possible play of light on your product. A sample bottle will talk for itself. Write for one! Owens-Illinois Glass Company, Toledo, Ohio.

Owens-Illinois
BOTTLES

ing of an employe.

Employes are selected for character, ability to use their head in giving intelligent service rapidly. They must be neat and clean. They must have a cheerful disposition, and no trace of being temperamental. He has been successful evidently in his choice of employes because a customer always is met by a courteous salesman and by service boys whose every action gives the impression that they are glad to be of service to the customer.

Every employee is hired for so many hours, not just to wait on customers. As soon as a driveway is empty grease spots are wiped up. The station building and toilets must be immaculate at all times. The yard, drives and walks are swept many times a day.

When a car drives in the station salesman must be at the driver's side before the car stops and ascertain the customer's wants as to gasoline, oil, and tire pressure. From fall to spring he inquires about radiator service. During the summer months this is given voluntarily.

Set speeches are not used. The men must be able to think for themselves.

At the same instant a service boy starts cleaning the windshield. Then he proceeds to the back glass, radiator and finishes with the tires. They are taught not to rush, but to work effectively and rapidly without giving the customer the idea he is being given the rush act.

During busy hours, and on Saturday, Sunday and holidays, there are two service boys on the driveways, in addition to the station salesman. This service, although given speedily, must be thoroughly if the service boy is to keep his job. The windshield is not given a lick and a promise, but is cleaned immaculately. There never has been any let up in this service since the station was opened. And it doesn't make any difference whether a purchase is made or not.

Mr. Morgan takes great pride in his "boys", as he calls them. It is because of his kindly treatment, and because he is out on the driveways leading them instead of driving them that he is able to get this willing service so attractive to many regular customers.

One night each month Mr. Morgan takes his boys to one of the clubs for a supper. They have a little get-together meeting afterwards to discuss problems and devise ways of bettering service. Suggestions from employes are always welcome. A representative from his supplying company attends these meetings to discuss the merits of the products they handle and to instruct them in the various phases of refining petroleum products.

Whenever there is an oil men's meeting or a convention in the district of educational value, Mr. Morgan takes all of his boys that can be spared from the station. They make a day of it. They drive into other service stations and make purchases to get new ideas for their service.

One noticeable feature about Mr. Morgan's station is the absence of commanding signs such as "shut off your engine" and "drive to the right". He says he doesn't like to be bossed when he goes into a place of business to spend his money, and he thinks other people feel the same way. A refreshing variance in signs is the one on the center post of his driveway which reads "drive either way."

Mr. Morgan buys his gasoline in tank cars. He has a bulk plant with 40,000 gallon capacity. He has only this one service station and no dealer accounts. He says he has all he can do to take care of this one.

He is a 100 per cent distributor for Mid-Continent Petroleum Corp. He doesn't handle any of the nationally advertised oils because his station is two blocks away from the highway and he doesn't get much of a play at the tourist business.

He has cut price competition too. Just one block away is a station selling gasoline 2 cents off the regular price to stockholders and they also sell many brands of nationally advertised oils at 5 cents a quart below the regular price. Two blocks in the other direction is a bulk plant and service station combined that has a 3 cent cut price posted.

"Service is not our motto; it's our business" is the original slogan adopted by Mr. Morgan.

Daily Contact with Entire Sales Force Helps Sales and Collections

By R. H. Thomas*

Written Exclusively for NATIONAL PETROLEUM NEWS

WHEN Fred, Frank and Pearl Boileau, and A. N. Younglove as a silent partner, decided to engage in the distribution of petroleum products in 1912 at Pomona, California, the inventory consisted of limited storage for distillate, kerosene and gasoline; a tank-wagon; a span of horses; a barn and a small shack for an office building.

Today this Home Oil Co. has storage for 72,000 gallons of light oils and 36,000 of lubricating oil. Seven trucks are kept busy making deliveries and six cars are in constant use by salesmen calling on the trade.

The company owns ten service stations located at strategic points and controls 20 others under lease. The stations are situated at Pomona, Ontario, San Demis, Rialto, Monrovia, Glendora, Baldwin Park, Upland and Fontana.

An up-to-date garage and machine shop keeps the equipment house and in excellent operating condition. A neatly arranged warehouse keeps package and barreled goods ready for prompt delivery. A good sized office building supplants the shack.

When the company was organized, distillate and lubricants for pumping plants located throughout the territory were the big seller. One of the large oil companies had practically all the garage and smoke-stack business. As automobiles and trucks became more numerous the Home Oil Co. decided to extend its service by filling cars and trucks at the plant by using buckets and chamois. This gave its officials the thought that a service station would pay, as a number of motorists drove to the plant for service. To try it out farther, a pump was installed at the plant, and it paid right from the start. This, in reality, was the first service station in that part of southern California.

A few years ago Pearl Boileau and A. N. Younglove sold their interests in the business to Fred and Frank Boileau, and W. E. May bought into the company. Under the present management another bulk station was opened up at Fontana, about 25 miles northeast of Pomona. Two trucks are operated from this station under the personal direction of Frank Boileau.

The entire sales organization is under Fred Boileau, sales manager, and the credit department is headed by Mr. May. Associated Oil Co. products are dispensed throughout.

Here is how the business was increased to its present proportions.

Each morning all the salesmen and drivers are called together for short conferences at the Pomona and Fontana plants. Each man is checked up on the previous day's accomplishments, and on what he was instructed to do. If any man "slipped" in carrying out his part of the program, it is not ancient history when it comes to the attention of the sales manager. Arrangements are made to pursue definite plans and excuses don't go. After discussing the previous day's work with each man, the current day's work is taken up in similar manner. When the men leave the office they know that they have something definite to do that day—and the best way to go about it.

Each man takes a personal interest in the business for a very good reason—the reason being a percentage of the yearly net profits. This has contributed materially in maximum effort on the part of each man to make his activities as profitable as possible and in limiting the volume of help to actual needs. Each man is willing to assist the other fellow. Their slogan is, "Greatest profitable gallonage at lowest cost consistent with good service."

To further stimulate efficiency and salesmanship, a Motor-Mates Club was organized. This meets once a month, in the evening, and a special speaker is engaged to give an address on salesmanship and sales methods, or on collections, or engineering problems peculiar to the territory. In addition the sales manager discusses general business problems and quotas for the ensuing month, and outlines the program to be perused.

In addition to coming in on a por-

*Author of "Merchandising of Petroleum Products."

An automobile service station at Pomona, Calif., in 1913. Gasoline dispensed was by buckets and strained through chamois. A gasoline pump was installed in 1914

NOW the Proven, Pneumatic Riveting-Hammer Principle is Successfully Applied to HIGH-PRESSURE LUBRICATION

7500 lbs Grease Pressure with Only 125 lbs Air Pressure

THE ARO Pneumatic, Super-Pressure Lubricating Principle has won its credentials in exhaustive factory, garage and service station tests.

Now it is offered to the trade as an exclusive ARO engineering development — revolutionary in design and performance, but thoroughly proven in its successful application of the time-tested, pneumatic riveting hammer, super-pressure principle. So simple and practical, that there are only two moving parts — the dual piston and the steel ball check. 7000 high velocity hammer blows per minute build up a grease pressure of 7500 lbs. on only 125 lbs. air pressure. Licensed under Alemite.

There you have the heart of the ARO story. There you have the reason for investigating this remarkable unit.

A Model for Every Service Requirement

In addition to Portable Hi-Pressure Lubricators equipped with ARO Pneumatic-Hammer Grease Gun, there are Air and Electrically Operated Gear Grease Dispensing Models. Also, stationary Multiple-Unit Systems providing many advantages for super-service installations.

MODEL 10

A three-point suspension, swivel roller bearing caster, portable model. Equipped with 12½ ft. air hose; 10 ft. dual grease and air hose; convenient filler cap; triple steel braid whip-end hose with Alemite Connector and Zerk Adapter; grease capacity, 25 lbs. Tank is 200 lb. W. P. Copper Brazed. 7500 lbs. grease pressure is generated in gun. Only 125 to 150 lbs. pressure in tank and hose.

Complete $102.50

Write for BULLETIN No. 10

The ARO EQUIPMENT CORPORATION
BRYAN, OHIO, U.S.A

tion of the net profits at the end of the year, friendly rivalry between drivers is encouraged by cash prizes to the first and second man exceeding their quotas for the month. The quotas are arrived at through knowledge of possibilities and past sales. The men are thoroughly sold on the fairness of their quotas and go after them with enthusiasm, convinced that they can be reached, because the goal is within the reach of those who actually try.

Also, the driver who collects the most money on past due accounts and sells the most merchandise for cash each month is awarded a cash prize.

Credit for the initial fill of gasoline is extended to service station operators worthy of credit and they pay for whatever it takes to replenish the stock thereafter. Thirty days is permitted on lubricants and specialties.

Ranchers who are worthy enjoy a 30-day extension of credit, the same as dealers. The company makes it a practice to let other oil companies supply the requirements of those who refuse to pay with reasonable promptness. They feel that it does not pay to waste time making repeated trips for their money after having delivered quality merchandise. The owners of the business know the credit standing of those living in the territory—and they make it a practice to pick their customers and take care of them so as to hold their business.

Mr. Frank Boileau, in charge of the bulk plant at Fontana, Calif. and one of the owners of the Home Oil Co. of Pomona, Calif.

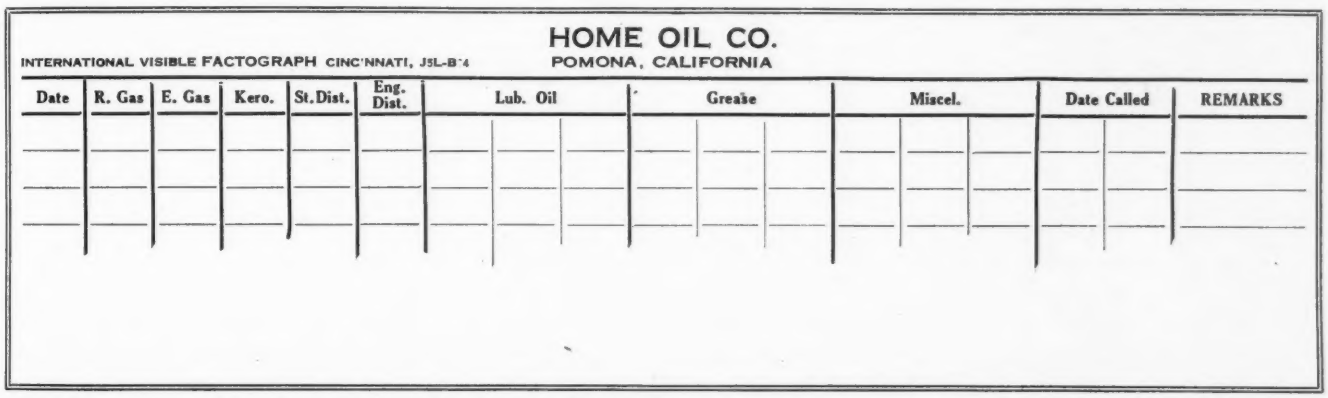
The Home Oil Co. has developed a nice business through dealers. With this trade, Veedol motor oil sales have yielded a nice profit, as eastern oil is pushed harder by dealers than western oils. With the service station and ranching trade, Cycol motor oils take the lead.

They find that the broadcasting programs of the Associated Oil Co. do much to create consumer demand for their products.

One of the specialties which has proved to be an excellent seller is fly spray. This is pushed vigorously by all members of the sales force, and is a very profitable number.

The sales manager keeps a very accurate record of costs. When I asked him what it cost per gallon to deliver his refined products, he said the average for the past few years was just under two cents. The cost of marketing at service stations averaged three cents.

Each driver and salesman is given statements daily of accounts due in the territory to be covered that day. A close check-up is made each day to know what remains unpaid and why any accounts were uncollected. This close check-up and constant follow-up of accounts enables the company to have their working capital usefully

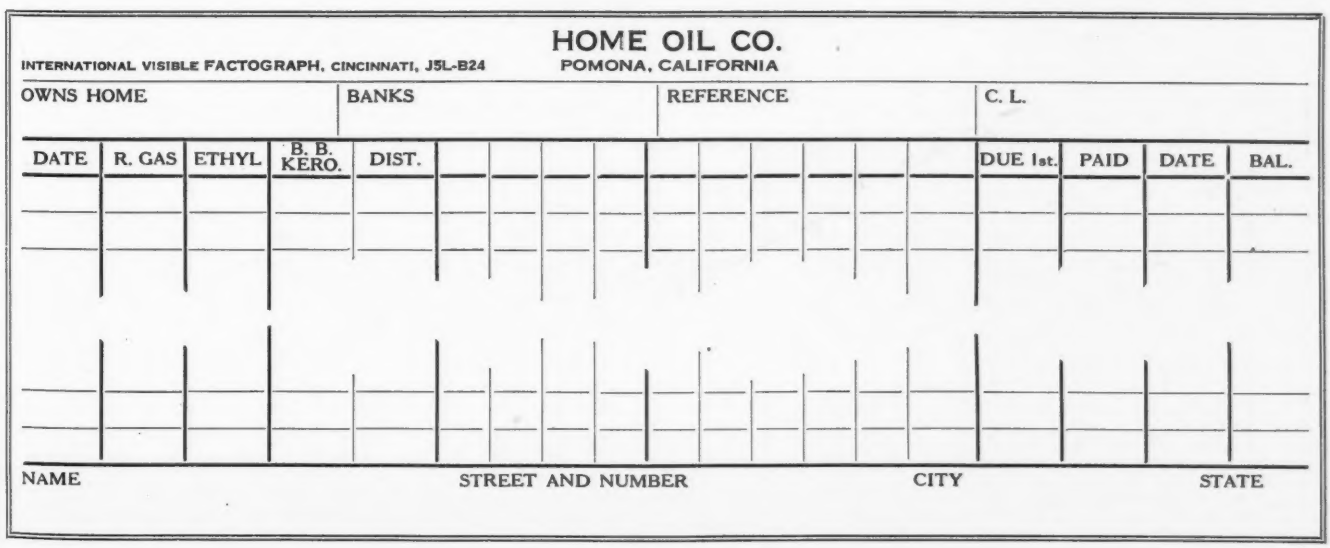


HOME OIL CO.

INTERNATIONAL VISIBLE FACTOGRAPH CINCINNATI, J5L-B24 POMONA, CALIFORNIA

Date	R. Gas	E. Gas	Kero.	St. Dist.	Eng. Dist.	Lub. Oil			Grease			Miscel.			Date Called		REMARKS

The Home Oil Co., Pomona, Cal. uses the International Visible Factograph method of keeping track of the business of each individual customer. The white sheet (top) is posted daily and the yellow card (below) is a monthly decapitulation



HOME OIL CO.

INTERNATIONAL VISIBLE FACTOGRAPH, CINCINNATI, J5L-B24 POMONA, CALIFORNIA

OWNS HOME | BANKS | REFERENCE | C. L.

DATE	R. GAS	ETHYL	B. B. KERO.	DIST.										DUE 1st.	PAID	DATE	BAL.

NAME STREET AND NUMBER CITY STATE

Mr. Fred Boileau, Sales Mgr., Home Oil Co., Pomona, Calif. and one of the owners of the company

employed, instead of being tied up in frozen assets.

Not only is a list of all customers in the territory kept, but it is checked frequently to learn when the last delivery was made to each, and just what was bought. This enables the sales manager to see if any customers have gone elsewhere and to bring the matter to the attention of those responsible for not getting the business. Mr. Boileau feels that a customer would rather buy his requirements of petroleum products and specialties from one concern than to scatter them among several companies. That his assumption is correct, there can be no doubt, as the sale of all products handled by the company have increased steadily. Mr. Boileau does not deputize a clerk to dig out this information for him. He does it himself because he believes that it is the sales manager's job personally to get "the low down" on sales activities.

The system employed for keeping track of customers and their purchases is the International Visible Factograph

Mr. E. W. May, Credit Mgr., Home Oil Co., Pomona, Calif. and one of the owners of the business

Form 10

HOME OIL COMPANY

REPORT OF RECEIPTS AND DELIVERIES

Tank Wagon / Tank Truck — Number ..... Station ..... For (Date) ..... 19....

	TANK	GASOLINE GAUGE OUT	GASOLINE GAUGE IN	ETHYL GASOLINE GAUGE OUT	ETHYL GASOLINE GAUGE IN	KEROSENE GAUGE OUT	KEROSENE GAUGE IN	ENGINE DIST. GAUGE OUT	ENGINE DIST. GAUGE IN	STOVE DIST. GAUGE OUT	STOVE DIST. GAUGE IN	LUBRICATING OIL KIND	LUBRICATING OIL GALLONS OUT	LUBRICATING OIL GALLONS IN	GREASE KIND	GREASE POUNDS OUT	GREASE POUNDS IN	DRIVER'S INITIALS
On Hand 7 a. m.		(MEMO)																
First Trip	1																	OUT
	2																	
	3																	IN
	Side Rack 4																	
Second Trip	1																	OUT
	2																	
	3																	IN
	Side Rack 4																	
Third Trip	1																	OUT
	2																	
	3																	IN
	Side Rack 4																	
Fourth Trip	1																	OUT
	2																	
	3																	IN
	Side Rack 4																	
TOTALS																		CORRECT
Balance to Account for																		
Deliveries per Form 11																		
SHORT (BLACK) OR OVER (RED)																		Warehouseman

DELIVERY EQUIPMENT

	BUCKETS (LUBRICATING) OUT	BUCKETS (LUBRICATING) IN	BUCKETS (LIGHT OIL) OUT	BUCKETS (LIGHT OIL) IN	MILK CANS OUT	MILK CANS IN	FORCE PUMPS OUT	FORCE PUMPS IN	HOSE OUT	HOSE IN								
First Trip																		
Second Trip																		
Third Trip																		
Fourth Trip																		

Form of stock report used by the Home Oil Co.

. . . and they're s a f e too!

Witness COLUMBIAN'S safety devices that have revolutionized the transportation of inflammable liquids in Truck or Trailer Tanks . . . integrally welded pipelines. . . i n s i d e operating faucets. . . expansion domes . . . automatic vents. . . internal safety valves. . .

For any load. . .
On any road. . .

SPECIFY

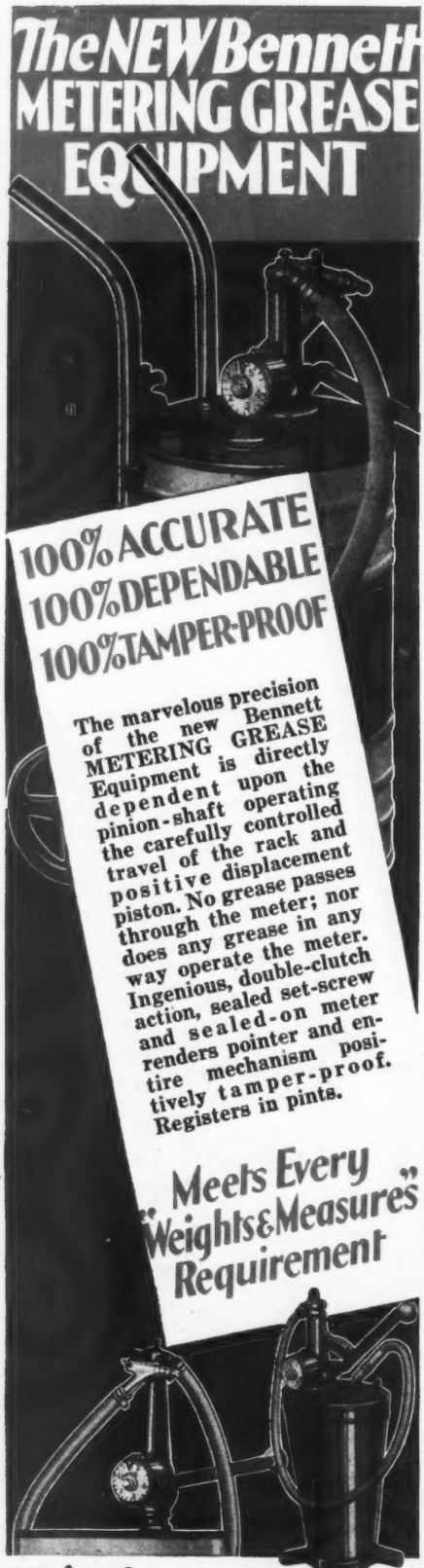
COLUMBIAN

COLUMBIAN STEEL TANK COMPANY

EST'D 1894

TANKS FOR THE WORLD

1401-1621 W. 12TH STREET KANSAS CITY, U.S.A.


The NEW Bennett
METERING GREASE
EQUIPMENT
100% ACCURATE
100% DEPENDABLE
100% TAMPER-PROOF
The marvelous precision of the new Bennett METERING GREASE Equipment is directly dependent upon the pinion-shaft operating the carefully controlled travel of the rack and positive displacement piston. No grease passes through the meter; nor does any grease in any way operate the meter. Ingenious, double-clutch action, sealed set-screw and sealed-on meter renders pointer and entire mechanism positively tamper-proof. Registers in pints.
Meets Every "Weights & Measures" Requirement
Write for BULLETIN No GR-2
QUALITY BUILT
Bennett
Dispensing Equipment
SERVICE STATION EQUIPMENT COMPANY
DIVISION OFFICES
and WAREHOUSES
COAST TO COAST
FOREIGN DIVISION
32 Broadway New York City

The bulk loading rack of the Home Oil Co. at Pomona, Calif.

—sample of which is shown herewith. This record indicates the date of sale, what was sold, calls, customer's bank, reference given when the account was opened and the condition the account is in. The white sheet is posted daily and the yellow card is a monthly recap.

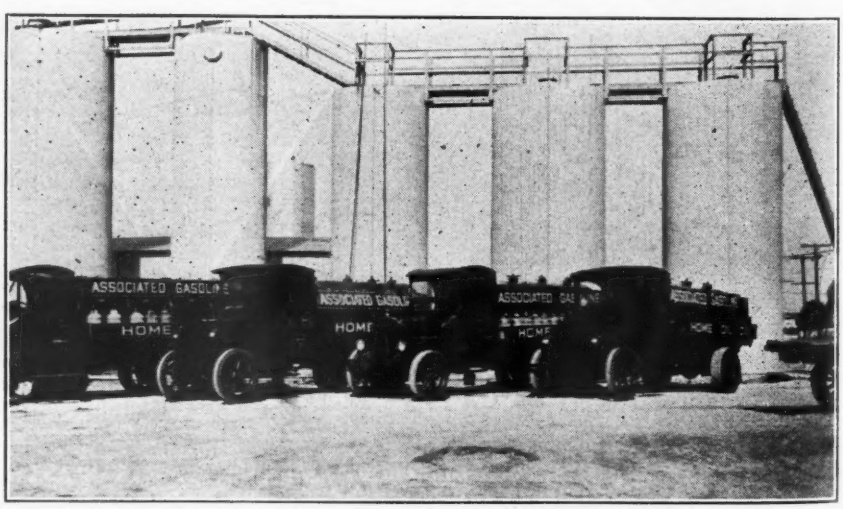
Salesmen and drivers cooperate in their drive for business. Misunderstandings, jealousy, and other handicaps to business progress do not thrive among the men so readily when they are anxious to get all the good business they can in order to increase their portion of the profits at the end of the year. Also difficulties are aired and ironed out daily.

To keep stock losses down to a minimum, one man is responsible for loading all trucks. When the trucks return to the plant each compartment is checked. There has been practically no difficulty over stock matters, and the reason may be attributed to the system employed. If more agents would check themselves as carefully, their stock troubles would vanish just as they have here. A sample of the stock report used by this company is published with this article.

Considerable advertising is done and what signs are used are put up promptly when received. They do not sleep on the rafters in the bulk plant as I have known them to in many cases. Advertising literature is handed out at service stations and by the salesmen and tank-truck drivers to the trade.

No damaged or slow-moving stock is kept on hand indefinitely to utilize valuable space and to hamper the taking of inventory at the end of the month—or to tie up capital. Prices are reduced until it is disposed of. Nothing but a good, fresh-looking supply of merchandise greets the visitor to the plant, and nothing else gets on to the side rack of the tank-truck to be seen by others. As new package goods are received, they are piled next to the wall with previous shipments in front.

If a customer buys something he later desires to exchange for other merchandise because of having



Light oil storage and delivery equipment of the Home Oil Co. at Pomona, Calif.

bought a new tractor or other piece of equipment, the policy is to satisfy the customer without argument. Mr. Boileau says that seldom does a customer try to take undue advantage of the company. When an exchange is made, a record of the complete transaction is made right then and there so there can be no possible misunderstanding later regarding the account.

I asked Mr. Boileau, "Did you ever catch any of your service station operators slipping 'bootleg gasoline' through your pumps?" He replied, "Yes, that has happened—but not for long. We handled the matter in such fashion as to show the guilty one the error of his ways and have had no trouble along this line for a long time." Two men are employed at each service station. The hours for one are from six a. m. to eight p. m. with an hour out for each meal. The other man comes on at seven a. m. and closes the station at nine p. m.

The tank-truck salesmen work from seven a. m. to five p. m.

To stimulate the sale of motor oil at service stations, every effort which will not bore customers is made to get patrons to consent to frequent crankcase draining and replenishing, after having the cases cleansed through the use of flushing oil. The ratio of motor oil sales to 100 gallons of gasoline is about four to one.

None of the salesmen are compelled to learn a standardized sales presentation; but they are compelled to know their products. A check of each man's knowledge is made by the sales manager himself. He believes that "the proof of the pudding is in the eating." When a man is getting results, he knows that he is presenting his proposition correctly. When he doesn't, no time is lost in ascertaining the reason. Such assistance is given as may be necessary to develop the man into a real business producer or in finding out it cannot be done. Each man is supplied with local testimonials to back up his statements regarding the satisfaction to be derived from the goods offered.

Blackhawk Mfg. Co., Milwaukee, manufacturer of wrenches and hydraulic jacks, has added two new Pacemaker jacks to its line of 25 models from 1 to 75 tons capacity.

These Pacemakers are 2½ ton jacks for Ford, Chevrolet, International, Dodge, Reo, Mack, White, Whippet and other speed wagons and light delivery trucks from 1 to 2½ ton capacity.

* * *

American Meter Co., 8 S. 13th st., Birmingham, has appointed R. D. O'Neil as engineering and sales representative.

* * *

The Prest-O-Lite Co., Inc., 30 E. 42nd st., New York, is operating its new plant at Casper, Wyo., for the manufacture and distribution of dissolved acetylene.

Skilled Supervision
Guarantees the Quality of Gulf Products

COASTAL AND PARAFFINE CRUDES
GASOLINE—LUBRICATING OILS
NAPHTHA—GAS—OILS
WAX—PETROLEUM COKE
CYLINDER—ENGINE—CORDAGE

Gulf Refining Company

General Sales Offices
PITTSBURGH, PA.

District Sales Offices
New York, Boston, Philadelphia, Louisville, Atlanta, Houston, New Orleans

Gasoline And Other Motor Fuels

by Ellis and Meigs, is a book which gives a complete survey of the field and a description of practically every process of making gasoline and most other motor fuels of promise or prominence.

The price of the book is $10. Just send us your check and we will mail a copy of it to you.

National Petroleum News, 1213 W. Third St., Cleveland, Ohio

BRIGHT STOCK of Superlative Quality!

Oil jobbers who are compounding motor and tractor oils cannot make a wiser selection than INDEPENDENT Super "D" BRIGHT STOCK for building a high grade line of lubricants.

INDEPENDENT BRIGHT STOCK is famous as a low-carbon, de-waxed, heat-resisting product.

Keep ahead with Quality that cannot be surpassed.

Your *best* bet . . . a full line of "10-Test" *De-Carbonized* Oils . . . with INDEPENDENT Gasolines. Write or wire. **(TJ21)**

INDEPENDENT OIL AND GAS COMPANY

Producers • Refiners • Marketers

Minneapolis Omaha TULSA Des Moines Kansas City

Crude Production by Fields

By Telegraph—Daily average gross output, by fields in U. S., for week ending with dates below as compiled by A. P. I.

	Aug. 2	July 26
Production east of Rockies	1,908,600	1,877,800
Increase		30,800
Total production in U. S.	2,515,300	2,488,700
Increase		26.600
Crude oil imports	204,000	188,285
Increase		15,715
Total crude supply	2,719,300	2,676,985
Increase		42,315

OKLAHOMA

	Aug. 2	July 26
Allen Dome	15,050	16,700
Asher	1,050	1,050
Asher, West	7,100	4,000
Blackwell	3,200	3,200
Bowlegs	13,800	17,400
Braman	3,300	3,400
Bristow-Slick	15,400	15,450
Burbank	15,800	16,000
Carr City	6,300	5,050
Cromwell	7,700	7,500
Cushing	13,400	13,450
Davenport	1,200	1,200
Duncan Dist.	10,050	9,300
Earlsboro	18,950	26,300
East Earlsboro	13,050	15,200
Earlsboro, So.	10,100	9,600
Fox	1,250	1,200
Garber	4,300	4,350
Graham	3,300	3,400
Healdton	12,000	12,100
Hewitt	7,150	7,200
Hubbard	1,500	1,500
Konawa	16,650	23,350
Little River	25,950	30,100
Little River, E.	10,300	10,050
Logan Co.	4,500	4,800
Maud	3,150	4,200
Mission	7,250	9,200
No. Okmulgee	10,450	10,450
Oklahoma City	100,400	77,450
Osage (Outside Burbank)	26,000	25,900
Papoose	2,750	2,750
Pearson	800	800
Sasakwa	5,450	6,100
St. Louis	24.150	26,450
Scholem-Alechem	14,200	15,100
Searight	7,900	9,350
Seminole	14,950	18,800
Seminole, East	2,000	2,500
So. Okmulgee	7,200	7,200
Thomas	650	650
Tonkawa	7,050	8,000
Wewoka	3,500	3,550
Yale-Jennings	7,950	7,950
Others	66,500	67,600
Total, Oklahoma	554,650	566,850
Decrease		12,200

KANSAS

Augusta - Fox Bush	2,750	2,750
Churchill	3,800	3,800
El Dorado-Towanda	14,050	14,000
Florence - Covert	750	800
Greenwood Co.	19,000	19,000
Oxford	2,700	2,750
Peabody-Elbing	2,600	2,700
Rainbow Bend	1,100	1,100
Russell	3,100	3,500
Sedgwick Co.	19,000	17,950
Voshell	10,100	10,700
Others	37,500	38,000
Total, Kansas	116,450	117,050
Decrease		600

NORTH LOUISIANA

Caddo, light	9,550	9,700
Caddo, heavy	2,600	2,900
Cotton Valley	2,050	2,050
De Soto and Red River	3,100	3,100
Haynesville	4,600	4,800
Holly	1,050	1,250
Homer	3,550	3,500
Sarepta Carterville	3,100	2,950
Urania	5,200	5,250
Zwolle	5,250	5,000
Others	1,600	1,650
Total, North Louisiana	41,650	42,150
Decrease		500

ARKANSAS

Champagnolle	4,400	4,400
El Dorado	4,100	4,200
Lisbon	950	950
Nevada	1,050	1,000
Smackover, light	5,100	5,150
Smackover, heavy	37,300	37,550
Stephens	900	950
Others	1,250	1,250
Total, Arkansas	55,050	55,450
Decrease		400

ROCKY MOUNTAIN

Wyoming

Big Muddy	1,750	2,050
Elk Basin	800	900
Grass Creek	2,100	2,050
Labarge	2,250	1,850
Lance Creek	150	150
Lost Soldier	1,050	950
Oregon Basin	2,900	2,850
Rock River	1,150	2,100
Salt Creek	30,050	30,000
Others	4,500	5,200
Total, Wyo.	47,700	48,100
Decrease		400

Montana

Cat Creek	1,150	1,150
Pondera	2,400	2,200
Sunburst	5,850	5,950
Others	50	50
Total, Mont.	9,450	9,350
Increase		100

Colorado

Florence	600	550
Fort Collins	1,200	1,350
Moffat (Craig)	1,250	1,200
Others	1,600	1,600
Total, Colo.	4,650	4,700
Increase		50

New Mexico

Artesia	700	700
Hobbs High	33,250	32,900
Bal. Lea Co.	7,000	6,500
Hogback	450	500
Rattlesnake	1,400	1,400
Table Mesa	100	100
Others	100	100
Total, N. M.	43,000	42,200
Increase		800
Total, Rocky Mountain	104,800	104,350
Increase		450

TEXAS (OUTSIDE GULF COAST)

Panhandle District

Carson Co.	8,700	8,900
Gray Co.	65,250	65,000
Hutchinson Co.	21,400	21,500
Wheeler Co.	750	600
Others	300	400
Total, Panhandle Tex.	96,400	96,400

North Texas

Archre Co.	16,150	16,250
Burkburnett	6,300	6,300
Electra	12,600	12,500
Iowa Park and K. M. A.	5,650	5,700
Montague-Cooke	9,750	9,800
Wilbarger	22,050	22,250
Others	1,700	1,750
Total, N. Tex.	74,200	74,550
Decrease		350

West Central Texas

Brown County	6,400	6,400
Callahan Co.	3,600	3,650
Coleman Co.	3,500	3,550
Eastland - Desdemona	5,600	5,650
Jack County	2,150	2,200
Palo Pinto Co.	500	550
Shackleford Co.	7,150	7,050
Stephens Co.	5,550	5,550
Throckmorton County	1,000	950
Young County	18,950	18,850
Others	1,000	1,000
Total, West Cent. Texas	55,400	55,400

West Texas

Crane and Upton Counties	38,800	39,400
Crockett Co.	2,250	2,150
Ector Co.	17,800	18,050
Howard Co.	27,500	29,300
Jones Co.	1,250	1,250
Mitchell and Scurry Co.'s	2,200	2,200
Reagan Co.	20,950	21,450
Winkler Co.	78,500	73,200
Yates	103,900	102,500
Balance Pecos Co.	3,400	3,850
Others	4,500	4,300
Total, West Texas	301,050	298,650
Increase		2,400

East Central Texas

Boggy Creek	3,100	2,900
Corsicana-Powell	5,700	5,800
Currie	350	350
Mexia	4,450	4,500
Nigger Creek	200	200
Richland	250	250
Van Zandt	26,200	26,000
Wortham	900	900
Total, East Cent. Tex.	41,150	40,900
Increase		250

Southwest Texas

Dale	300	300
Darst Creek	77,800	31,500
Laredo Dist.	13,200	12,200
Luling	9,850	9,900
Lytton Springs	850	850
Salt Flat	20,200	20,300
Somerset	1,600	1,600
Others	700	700
Total, Southwest Texas	124,500	77,350
Increase		47,150
Total, Texas (Outside Gulf Coast)	692,700	643,250
Increase		49,450

GULF COAST

Coastal Texas

	Aug.2	July 26
Barbers Hill	18,600	20,500
Batson	1,200	1,200
Big Creek	4,150	4,100
Blue Ridge	1,600	1,600
Boling	1,150	1,150
Damon Mound	700	700
Esperson	2,300	2,400
Fannett	900	800
Goose Creek	4,700	4,700
Hankamar	2,400	2,300
Hull	8,200	9,200
Humble	19,500	19,900
North Dayton	1,800	1,350
Orchard	2,000	2,800
Orange County	2,100	2,150
Pettus	6,200	5,900
Pierce Junction	12,100	11,150
Port Neches	2,200	1,950
Raccoon Bend	12,000	12,000
Refugio Co.	31,600	34,300
Saratoga	1,000	1,000
Somerville	1,500	1,450
Sour Lake	2,200	2,200
South Liberty	3,800	3,900
Spindletop	16,600	17,100
Sugarland	12,000	12,100
West Columbia	5,450	5,600
Others	2,300	2,400
Total, Coastal Texas	180,250	185,900
Decrease		5,650

Coastal Louisiana

East Hackberry	2,150	1,750
Old Hackberry	1,150	1,100
Edgerly	550	550
Evangeline	2,200	2,150
Lake Barre	1,300	1,500
Lockport	2,950	3,100
Port Barre	4,200	4,400
Sulphur Dome	3,300	4,000
Vinton	6,700	4,700
Others	2,950	3,200
Total, Coastal Louisiana	27,950	26,450
Increase		1,500
Total, Gulf Coast	208,200	212,350
Decrease		4,150

CALIFORNIA

Dominguez	10,000	10,000
Elwood - Goleta	41,500	45,700
Huntington Beach	28,300	28,000
Inglewood	17,200	17,200
Kettleman Hills	13,300	13,500
Long Beach	101,400	101,000
Midway-Sunset	63,000	63,000
Santa Fe Springs	110,000	110,500
Seal Beach	21,000	21,000
Ventura Ave.	48,000	48,000
Others	153,000	153,000
Total, Calif.	606,700	610,900
Decrease		4,200

EASTERN

(Not including Michigan)	124,500	126,500
Decrease		2,000

MICHIGAN

Mt. Pleasant	7,550	6,850
Muskegon	2,800	2,750
Saginaw	250	250
Total, Mich.	10,600	9,850
Increase		750

Compilation Of Mid-Continent Refinery Operations

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Mid-Continent Refinery Operations, Week Ended August 1 (By Telegraph)

	Kansas	Oklahoma	North & Cent. Texas	West Texas	North La.-Ark.	Total Week Ended Aug. 1
Plants Reporting.....	12	29	25	15	12	93
Da. Av. Cap. (Bbls.)..	94,500	161,700	106,100	82,000	77,000	521,300
Da. Cracking Capacity	30,700	52,600	17,200	5,000	22,700	128,200
Da. Av. Crude Runs..	54,842 — 11.8	107,980 + 0.08	72,878 + 1.6	39,867 — 14.6	32,057 — 26.8	307,624 — 7.4
Da. Av. Other Oils...	7,381 — 19.2	8,112 + 29.0	3,688 + 35.5	3,930 + 20.8	19,417 — 10.0	42,528 — 1.0
GASOLINE—Gallons						
Stocks, July 25.....	20,853,000	61,023,000	23,465,000	12,989,000	14,816,000	133,146,000
Prod. 7-25 to 8-1.....	10,048,000 — 11.1	18,886,000 + 2.7	10,571,000 + 3.5	4,726,000 — 10.6	5,765,000 — 12.0	49,996,000 — 3.4
Ship. 7-25 to 8-1.....	12,569,000 — 3.0	21,095,000 + 1.4	9,922,000 + 6.4	4,464,000 + 12.5	7,221,000 + 15.1	55,271,000 + 3.7
Stocks, Aug. 1.....	18,332,000 — 12.1	58,814,000 — 3.6	24,114,000 + 2.8	13,251,000 + 2.0	13,360,000 — 9.8	127,871,000 — 4.0
Ratio Sales to Prod...	125.1%	111.7%	93.9%	94.5%	125.3%	110.6%
KEROSENE—Gallons						
Stocks, July 25.....	9,150,000	8,686,000	2,625,000	4,000	1,425,000	21,890,000
Prod. 7-25 to 8-1.....	1,712,000 — 3.3	2,189,000 — 21.4	1,418,000 + 3.2	47,000 + 32.9	370,000 — 21.8	5,736,000 — 10.5
Ship. 7-25 to 8-1.....	2,556,000 + 44.3	2,358,000 — 59.1	1,577,000 + 32.0	47,000 + 88.0	454,000 + 35.1	6,992,000 — 23.1
Stocks, Aug. 1.....	8,306,000 — 9.2	8,517,000 — 1.9	2,466,000 — 6.1	4,000	1,341,000 — 5.9	20,634,000 — 5.7
Ratio Sales to Prod...	149.3%	107.7%	111.2%	100.0%	122.7%	121.9%
STOVE DISTILLATE—Gallons						
Stocks, July 25.....	4,594,000	3,606,000	524,000	207,000	734,000	9,665,000
Prod. 7-25 to 8-1.....	211,000 — 56.8	482,000 — 35.6	242,000 — 2.0	124,000 — 6.8	16,000	1,075,000 — 33.5
Ship. 7-25 to 8-1.....	262,000 — 16.8	569,000 +324.6	84,000 — 29.4	116,000 + 27.5	16,000	1,047,000 + 58.9
Stocks, Aug. 1.....	4,543,000 — 1.1	3,519,000 — 2.4	682,000 + 30.2	215,000 + 3.9	734,000	9,693,000 + 0.3
Ratio Sales to Prod...	124.2%	118.0%	34.7%	93.5%	100.0%	97.4%
GAS OIL—Gallons						
Stocks, July 25.....	6,243,000	44,764,000	4,259,000	3,799,000	4,995,000	64,060,000
Prod. 7-25 to 8-1.....	939,000 — 24.4	2,391,000 +124.9	654,000 + 16.4	573,000 +755.2	2,384,000 — 13.0	6,941,000 + 22.4
Ship. 7-25 to 8-1.....	760,000 — 35.2	2,545,000 + 37.9	786,000 + 56.9	355,000 — 68.9	2,551,000 — 20.9	6,997,000 — 11.3
Stocks, Aug. 1.....	6,422,000 + 2.9	44,610,000 + 0.3	4,127,000 + 3.1	4,017,000 + 5.7	4,828,000 — 3.3	64,004,000 — 0.1
Ratio Sales to Prod...	80.9%	106.4%	120.2%	62.0%	107.0%	100.8%
FUEL OIL—Gallons						
Stocks, July 25.....	31,374,000	48,123,000	73,224,000	23,385,000	24,293,000	200,399,000
Prod. 7-25 to 8-1.....	4,499,000 — 8.3	5,947,000 — 4.7	8,789,000 + 4.8	5,307,000 — 23.9	4,900,000 — 9.4	29,442,000 — 7.8
Ship. 7-25 to 8-1.....	3,904,000 + 15.4	4,463,000 — 44.1	9,213,000 — 6.0	5,986,000 +264.3	5,453,000 — 10.3	29,019,000 + 0.4
Stocks, Aug. 1.....	31,969,000 + 1.9	49,607,000 + 3.1	72,800,000 — 0.6	22,706,000 — 2.9	23,740,000 — 2.3	200,822,000 + 0.2
Ratio Sales to Prod...	86.8%	75.0%	104.8%	112.8%	111.3%	98.6%

Gasoline Produced by Various Methods, Week Ended August 1

	Kansas	% of Total	Oklahoma	% of Total	North & Cent. Texas	% of Total	West Texas	% of Total	Louisiana-Arkansas	% of Total	Total	% of Total
Straight Run.....	5,565,000	55.5	11,353,000	60.1	6,637,000	62.8	4,277,000	90.5	1,021,000	17.7	28,864,000	57.7
Cracked.....	3,934,000	39.2	5,813,000	30.8	2,415,000	22.8	173,000	3.7	3,579,000	62.1	15,914,000	31.8
Natural.....	538,000	5.3	1,720,000	9.1	1,519,000	14.4	276,000	5.8	1,165,000	20.2	5,218,000	10.5
Total.....	10,048,000		18,886,000		10,571,000		4,726,000		5,765,000		49,996,000	

+ or — columns are % changed over previous week.

Mid-Continent Refinery Runs Reduced 7.4%

Staff Special—By Telegraph

TULSA, Aug. 4

A REDUCTION of 5,200,000 gallons in gasoline stocks was made in the week ended Aug. 1 by refineries in the Mid-Continent reporting weekly to NATIONAL PETROLEUM NEWS. Total stocks at the end of the week were 127,871,000 gallons which was only 6,200,000 gallons above those on hand Aug. 2, 1929.

Crude runs in the district were reduced 24,000 barrels daily average or 7.4 per cent. This can be accounted for in part by the fact that several refiners ran their quotas of crude in the first three weeks of July and were virtually closed down last week.

As a result of the lower throughput the production of gasoline by reporting plants was cut 1,700,000 gallons. At the same time shipments increased almost 2,000,000 gallons. Kansas was the only state not to report an increase in business.

Summary for the Month

Production and shipments, all reporting refineries, for four weeks ended Aug. 1. Change in stocks figures from July 4.

GASOLINE

	Gallons
Production	201,905,000
Shipments	222,085,000
Net change in stocks	—20,180,000
Ratio sales to production	110.0%

KEROSENE

Production	24,471,000
Shipments	30,155,000
Net change in stocks	—5,684,000
Ratio sales to production	123.2%

STOVE DISTILLATE

Production	5,169,000
Shipments	4,364,000
Net change in stocks	+805,000
Ratio sales to production	84.4%

GAS OIL

Production	26,079,000
Shipments	27,267,000
Net change in stocks	—1,188,000
Ratio sales to production	104.8%

FUEL OIL

Production	118,477,000
Shipments	115,763,000
Net change in stocks	+2,714,000
Ratio sales to production	97.7%

Kerosene stocks were reduced 1,200,000 gallons in the week when output was cut although shipments were lower than in the previous week.

Magnolia Pipe Line Runs For May, June

Houston, Aug. 1.—Magnolia Petroleum Co., pipeline department, announces from Dallas headquarters the following crude oil runs for June, which are shown in comparison with May.

	May	June
Bright stock (Wewoka)	163,034.31	149,700.02
Wewoka	504,623.17	463,128.51
Duncan-Walters	39,977.29	39,631.80
Seminole	33,451.19	35,263.95
Cushing	233,072.14	255,254.72
Healdton	210,976.42	215,829.96
Hewitt-Graham	134,845.16	125,587.59
Yale	39,773.55	37,989.41
Oklahoma City	.....	368,288.90
Total Kans.-Okla.	1,359,753.23	1,690,674.86
Archer	19,856.51	20,071.13
Burkburnett	62,469.51	57,847.70
Commanche	16,309.55	14,752.45
Electra	130,235.64	125,846.52
Corsicana—Heavy	8,067.36	8,397.54
Corsicana—Light	11,670.92	11,963.77
Henrietta	1,701.24	1,477.85
Iatan	12,747.69	11,702.13
Luling	268,655.92	254,285.00
Lytton Springs	28,797.11	29,310.01
Mexia-Wortham	17,948.13	17,308.22
Mirando—Heavy	162,789.65	.....
Mirando—Light	1,691.84	.....
Mirando	.....	172,807.61
Olden	7,289.67	7,304.52
Panhandle	289,545.43	244,185.85
Panola	2,159.65	815.00
Stephens	7,671.64	7,161.66
Thrall	1,235.66	1,227.11
Crane-Upton	96,482.24	83,985.67
Glasscock	42,590.62	35,788.35
Darst Creek	168,536.57	109,153.98
Winkler	53,841.51	30,721.13
Total Texas	1,412,294.06	1,246,113.20
Hackberry	1,940.46	23,801.40
Haynesville	5,777.75	4,655.05
Bull Bayou	33,213.55	30,572.12
Cotton Valley	23,852.88	23,636.76
Pine Island	19,643.80	22,977.15
Total Louisiana	84,428.44	105,642.48
East El Dorado	3,589.85	3,445.84
Smackover	46,684.84	55,005.31
El Dorado-Rainbow	42,535.52	37,240.53
Total Arkansas	92,810.21	95,691.68
GRAND TOTAL	2,949,285.94	3,138,122.22

OKLAHOMA-KANSAS

Report for June		Dly. Avg.
Runs	1,981,160.00	66,020.00
Shipments	1,961,671.00	65,390.00
Total stock	6,887,526.00	.....

TEXAS

Wichita, Wilbarger, Archer		
Runs	220,002.00	7,333.00
Shipments	247,876.00	8,263.00
Petrolia		
Runs	1,478.00	48.00
Shipments	1,478.00	48.00
Eastland, Stephens		
Runs	29,219.00	973.00
Shipments	.....	.....

TOTAL STOCK, 172,400.00—North Central Texas Field.

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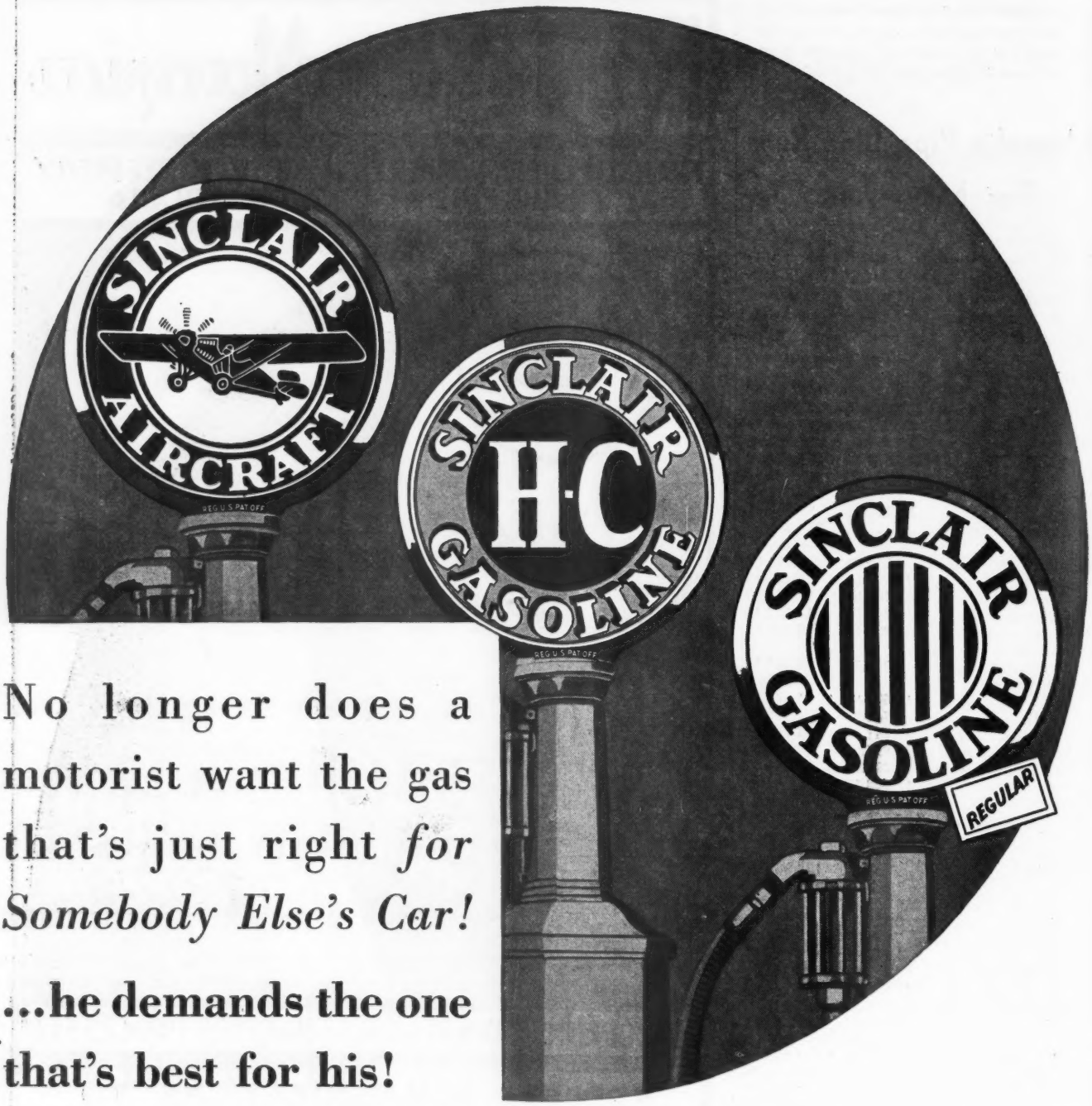

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Refinery - Tank Wagon Markets

Increase in Industrial Work Creates Better Demand for Pa. Fuel Oil

AN INCREASE in industrial activity in the Appalachian region resulted in an active fuel oil market in Pennsylvania the past week. Sales of fair quantities of fuel were made at 3.25 cents per gallon and brokers were having difficulty covering on sales made at 3.125 cents.

The fuel oil buying already has taken up most of the August output of some plants.

In California the current low rate of crude runs to stills is having its effect on fuel oil markets. Only scattered small sales were made last week below 50 cents per barrel while most quotations now are at 50 to 60 cents per barrel.

In the Mid-Continent high gravity fuels were a little more active but other grades were slow. Industrial buying apparently had not reached that district in spite of the reopening of a number of automobile and accessory plants in the Detroit region.

Gasoline markets generally failed to show much improvement during the week although there was some export inquiry at the Gulf for early loading which led the trade to believe that European stocks have been allowed to run low. California export markets were quiet.

Domestic gasoline markets were unsettled on the Atlantic seaboard and in the Appalachian region. Prices were shaded in a number of centers on the east coast. In the Mid-Continent there seemed to be more optimism as prices of Indiana-Illinois refiners seemed to be on a better basis.

Contract shipments of gasoline were at a high level in all refining centers. Spot buying was slow, however, as the end of the month approached. In Chicago considerable trading developed in gasoline for August delivery. Prices on these deals were not above current spot levels.

Wax markets showed more life during the week as British and South American buyers entered the market for substantial quantities for both prompt and deferred shipment. Buying was of both crude scale and fully refined waxes.

Lubricating oils continued quiet.

August Trading Features Chicago Market

Staff Spcial

CHICAGO, Aug. 2.

THE spot market was featureless in Chicago throughout the last week of July. Open market buying of gasoline improved somewhat, although it was still far from satisfactory to the trade. Contract shipments continued exceptionally good. Kerosene demand was a shade better. Other commodities remained quiet.

Interest in gasoline centered largely around the August market. Reports regarding the outlook for the month varied considerably. In some quarters a more optimistic tone was noted while in others little hope was extended for any appreciable improvement in the general situation in the immediate future. Actual business closed during the past week seemed to substantiate the latter side.

Several large sales of U. S. Motor gasoline over August were reported at 5.875 to 6 cents a gallon. Smaller lots were sold at slightly above and below this price range. The foregoing do not represent short sales of resale agents, but actual sales which were traced back to point of origin. Material covered by most of the sales will originate in the Mid-Continent although some of it is to be shipped from Indiana and Illinois refineries.

There was little difference between the prices quoted by marketers for shipment from the Mid-Continent as compared with shipment from Indiana-Illinois refineries, except, of course, for delivery to differential territory.

U. S. Motor for shipment to differential territory points from Indiana and Illinois refineries was quoted largely at 5.50 to 6 cents, f.o.b. Group 3. Prices for Detroit delivery receded still further with the minimum slipping to 8.35 cents, delivered as against last week's low of 8.50 cents. With several of the large motor companies closed down for two to three weeks, competition for Detroit business has been unusually keen. The motor companies have been slow in placing orders for their August requirements.

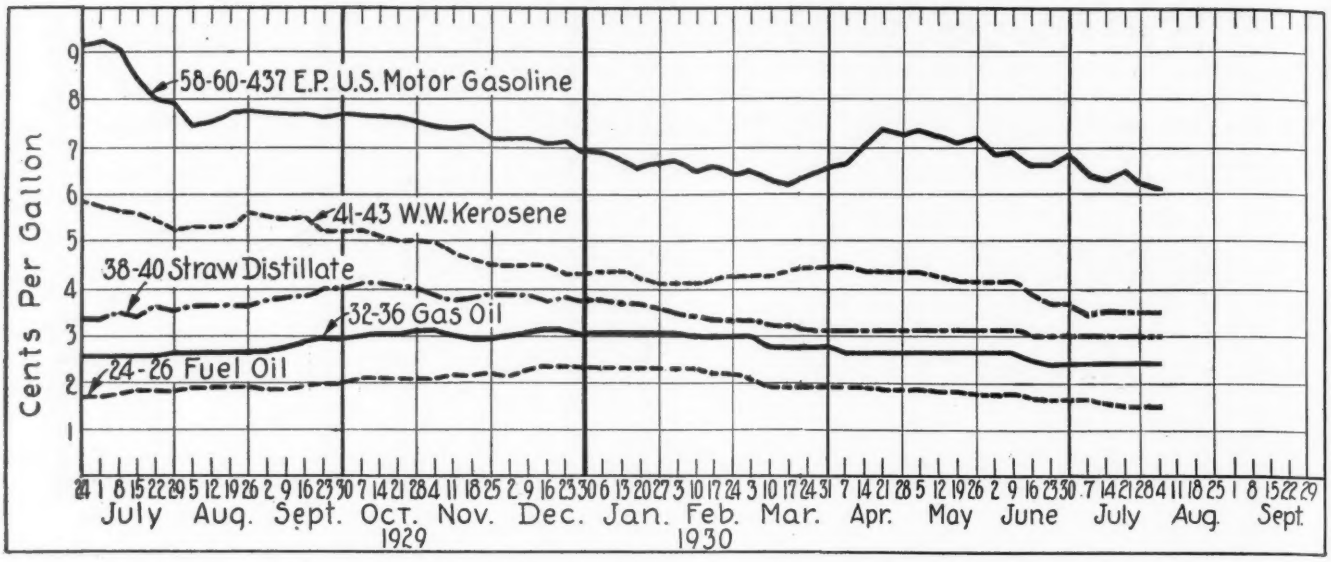
Despite the fact that spot gasoline business was better the past week, prices displayed further easing tendencies. Spot sales of U. S. Motor covered a wide range—5.625 to 6.25 cents. The bulk of business fell within the range of 5.875 to 6.125 cents. A number of companies quoted up to 6.50 cents but reported no spot sales.

Persistent reports of general downward revisions in retail prices caused considerable comment among the trade. Doubtless the reports received their impetus from the growing number of local reductions. The wide spread between tank car and tank wagon has encouraged a large amount of price cutting by smaller jobbers. Standard Oil Co. of Nebraska reduced prices as much as 5.75 cents a gallon at some points the past week to meet the competition of price cutters. Local reductions also were made by the Standard of Indiana.

Although kerosene movement was reported on the upgrade prices eased off 0.125 to 0.25 a gallon. The 41-43 w.w. grade sold mostly at 3.125 to 3.50 cents, and the 42-44 w.w. grade at 3.50 to 4 cents.

Spot market trading of the heavier burning oils was at a minimum. What activity there was in this part of the refined oil list was confined to future trading.

Current Prices of Principal Mid-Continent Refined Products


58-60-437 E.P. U.S. Motor Gasoline
41-43 W.W. Kerosene
38-40 Straw Distillate
32-36 Gas Oil
24-26 Fuel Oil
Cents Per Gallon
July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept.
1929
1930

Prices shown are in Group 3 basis and extended to date shown in Refinery Market Tables Section of this issue

New Boilers Installed At Oil City Refinery

CLEVELAND, July 11.—The Independent Refining Co., Oil City, is completing the rebuilding and expansion of its boiler house.

Two 500 B.H.P.and one 350 B.H.P. Heine boilers have been installed to replace five old return tubular boilers. The new boilers were placed on the same location as the old ones. The work was accomplished without any interruption of operations, the refinery running a large percentage of its capacity right along.

Slack coal from two 150-ton overhead bins is carried to the furnaces by an overhead traveling hopper, carrying a ton per load, the hopper carriage being equipped with scales by which each load is weighed before dumping. The boilers will be fired with Combustion Engineering Co. automatic steam operated underfeed stokers, Type E boiler pressure will be 125 pound, without superheat.

An International Water Softener system has been installed, placed immediately alongside No. 1 boiler, and having a capacity well above the present requirements of the plant. Water is treated with lime-soda and then filtered through two filters before entering the feed system. Feed water is heated by exhaust steam to around 200 F. and the condensed steam is returned through an oil separator to the feed water system, thus effecting a material saving in treating costs by re-using the previously treated water.

A ten-inch underground suction line, immediately in front of the furnaces, will remove ash from the pits as fast as formed, eliminating any handling by the operators. Feed pumps three in number, are controlled by Fisher controllers.

The boilers are equipped with Bailey meters and water-level regulators. Pyrometers and CO_2 meters enable operators to keep a complete record of the conditions of operation continuously, and heat and material balances will be available at all times to determine operating efficiency.

Shipments From Southern California

LOS ANGELES, July 31.—Shipments of bulk petroleums from Southern California ports to Foreign and Atlantic Seaboard ports for week ended July 26 were 1,317,591 barrels as compared with 1,202,768 barrels for previous week. Destination and quantity of shipments were as follows: (figures in barrels)

Destination	Crude	Gasoline	Diesel	Kerosene	Fuel	Gas-oil	Total
Pacific For.....	51,315	52,148	20,117	63,732	352,713	.....	540,031
Atlantic Dom...	.....	490,806	.....	.....	.....	.....	490,806
Atlantic For.....	.....	286,754	***	.....	.....	.....	286,754
							1,317,591

Total shipments from the same ports during June amounted to 10,923,246 barrels, against 9,301,960 barrels in May. The goods moved as follows:

Destination	Crude	Gasoline	Diesel	Kerosene	Fuel	Distillate	Total
Pacific Dom.....1,063,863		1,503,844	83,958	.....	912,194	82,731	3,646,590
Pacific For.	156,011	593,510	284,257	195,544	1,770,454	23,254	3,023,030
Atlantic Dom...	.....	2,686,039	129,040	81,000	.....	.....	2,896,039
Atlantic For.....	.....	1,158,901	.....	131,203	67,443	.....	1,357,547

During the first six months of the present year, total bulk shipments amounted to 58,335,967 barrels as against 68,019,086 barrels for the second six months of 1929.

Prices 10 Years Ago
July 26, 1920

	Oklahoma	Penna.
58-60 U. S. Motor....	23.50-24.00c	27.25c
80-84 Natural	20.00-21.50c	.....
Kerosene (41-43 Okla.; 47 w.w. Pa.)	10.50-11.00c	15.50c
Fuel Oil (24-26 Okla.; 38-40 Pa.)	$3.15-$3.30	12.50c
Crude (Okla. 35-35.9)	$3.50	$6.10
Chicago tank wagon		26.00c

Prices A Year Ago
July 29, 1929

	Oklahoma	Penna.
58-60 U. S. Motor....	7.9776c	10.00-10.25c
Grade A Natural.....	6.25-6.50c	.....
Kerosene (Okla. 41-43; Pa. 47 w. w.)	5.125-5.375c	6.75-7.25c
Fuel Oil (Okla. 24-26; Pa. 36-40)....	$0.70-$0.825	4.375-5.00c
Crude (Okla. 35-35.9)	$1.40	$3.80
Chicago tank wagon		16.00c

Mid-Continent Refinery Markets

Gasoline Markets Show Improvement

Staff Special

TULSA, Aug. 2.

THE Mid-Continent gasoline market at the beginning of August appeared on the verge of another one of its threatened upward trends, after a comparatively steady period the last week of July. Just how much of the threat was based on improved conditions, and how much on hope remained to be seen, but the signs at least appeared a little more favorable at this time.

The market experienced these threats almost every week during July, but for various reasons fell just short of an actual move upward. The Mid-Continent sellers were willing enough to see their prices move upward, but almost invariably their ambitions could not hold out against the quantity of gasoline moving from other territories into Standard of Indiana territory and into differential territory at prices which gave a net back on a group 3 freight basis so much below prices the Mid-Continent refiners quoted.

This time the situation at least appears better. Reports from Chicago August 1 and 2 indicated that the "dumping" by a few refiners in the Central States had ended and that prices were fractionally higher. Reports also indicated prices were just about in line with those being quoted by the Mid-Continent refiners for delivery into that territory.

If that situation remains and if the weather remains reasonably favorable for motoring sellers in this district anticipate that long looked for advance in gasoline prices, even though the expected advance is not more than 0.125 to 0.25 cent a gallon on the U. S. Motor grade.

There was an export inquiry in the field early in the week for three to four million gallons of gasoline. The inquiry was circulated by three brokers who are understood to be working together in assembling cargoes for foreign buyers. That was about all the definite information that could be obtained.

One report late in the week was to the effect that the gasoline had been bought in Oklahoma, but the refiner who was supposed to have sold it emphatically denied that he had obtained any export order. Another report was that the buyers had offered 6.20 cents a gallon, f.o.b. north Texas for 64-66, 375 e.p. gasoline without any takers. If that was true, one reason for the lack of interest may be attributed to the fact that an export company which has a contract with two or three north Texas refiners had requested early delivery on the purchases for August and the refiners accordingly had purchased a portion of their requirements from other refiners at 6.25 cents a gallon.

Still another report was to the effect that the brokers failed to obtain the order to buy the cargo because another export company had sold the cargo for less money than the brokers could have paid and gotten the gasoline delivered to a Gulf terminal.

Natural gasolines continued their upward stride with advances of 0.25 to 0.50 cent recorded in the course of the week. Since the middle of July prices have advanced a full cent, and with the present outlook so favorable further advances may be made before the middle of the month.

Demand the latter half of July was excellent. Several large orders were placed and at least two manufacturers were in the market periodically. They obtained virtually all the surplus naturals, and refiners meanwhile increased their requirements. On the heels of this increased demand came the proration schedule in the Oklahoma City field, which reduced natural gasoline production materially for those manufacturers operating in that district.

The sales manager for one extensive operator in that field said August 2 that his company had been producing around 65,000 gallons a day in the field, but that since proration had been in effect the production had dropped to around 15,000 gallons daily whereas his orders already on the books had called for the larger gallonage. He accordingly had to divert some of the production from other areas and apply the gasoline on those orders.

Kerosenes showed little life in Oklahoma although prices were generally unchanged throughout the week. In Kansas demand was improved slightly due to the fact that rains following on the heels of the harvest gave farmers an opportunity to do more plowing. The situation was unchanged in north Texas. Some kerosene was offered at attractive prices from north Louisiana for export but domestic prices for differential territory shipment remained unchanged.

Some buying of distillates for storage was reported, but that had no effect on prices. A few refiners quoted prices somewhat higher than the going market stating they preferred to store the oil rather than move it out in the off season at off season prices.

Gas oils were in comparatively active demand in some districts, both the low distillate and light fuel oil prices tended to hold gas oil prices down.

Low gravity fuel oils continued to be sluggish and stocks increased. The high gravity fuel was in more active demand, however, and one or two refiners said they had drawn on storage. Prices for all grades were steady.

No change was noted in neutral oil and cylinder stocks prices with the exception of the 200 No. 3 neutral, which was quoted at 11 to 11.50 cents as compared with 11.50 cents flat the previous week.

Inquiries for wax for deferred shipments were numerous but little business was reported. One large manufacturer said he was quoting only for prompt shipment at present. The trend appeared to be upward as far as price was concerned, although no changes actually were noted the past week.

Shell Conducts School On Lubrication

ST. LOUIS, July 31.—Industrial plant lubrication is being taught at the new training school for sales and lubrication engineers of the Shell Petroleum Corp. at South Roxana, Ill., near the company's Wood River refinery.

The school will be in session during June, July and August. In it are picked men, all University graduates. The theory and practice of lubrication will be studied primarily, but other subjects include the refining of crude oil and how Shell products are made.

Later the course will include advertising, accounting, auditing and service station operation.

Exports From Tampico District

Company	May	June
Transcontinental-Rayon Cos. (Standard of New Jersey)	.....	59,593
Huasteca Petroleum Co. (Pan American)	940,729	1,311,612
Mexican Eagle Oil Co. Ltd. (El Aguila)	1,068,931	992,193
Sinclair Mexican Companies	197,483	102,955
Empire Gas & Fuel Co.	155,227	249,933
Mexican Gulf Oil Co.	39,460	83,071
The Texas Co. of Mexico, S. A.	27,537	204,828
Mexican Atlas Oil Co.	.....	46,465
Panuco Boston Oil Co.	.....	53,248
TOTALS	2,429,367	3,103,893

Comparative Prices of 58-60 U. S. Motor Gasoline, 437 E. P., Group 3 and Point of Origin, to Jobbers Only

In Effect August 4

	Price F.O.B. Group 3		*Price F.O.B. Point of Origin*		*If for Particular Destination*
Oklahoma	6.2500	(Wt. Avg.)	6.2500	(Wt. Avg.)	
Kansas	6.25–6.75				S. O. Neb. & Indiana Territory, etc.
Kansas			6.8974	(Wt. Avg.)	Kansas only.
North Texas	5.875–6.25		5.875–6.25		
West Texas	6.00		5.75–6.25		
Louisiana-Arkansas	6.25–6.50				Michigan, Ohio and Indiana.
Louisiana-Arkansas			6.75		State or differential haul.
Indiana-Illinois	5.75–6.50			*	S. O. Indiana territory except Detroit and vicinity. For Ohio on delivered basis only.

*Shipments made from E. Chicago, Ind., and Wood River, Ill., according to conditions and freight rates; no prices F.O.B. point of origin can be given.

Chicago Resale Market

TRADING in gasoline for August delivery constituted a large part of the activity in the Chicago resale market during the past week. A number of important sales of 58-60 U. S. Motor were made at 5.875 to 6 cents per gallon for delivery over the month. The motor fuel is to be shipped largely from the Mid-Continent although some sales were made from central states plants.

Spot sales of gasoline were somewhat larger in volume during the week. Prices of U. S. Motor covered a wide range, from 5.625 to 6.25 cents per gallon. Some quotations were made as high as 6.5 cents but no sales were reported at that level.

The differential territory market continued toward lower levels with quotations from Indiana and Illinois plants ranging from 5.5 to 6 cents per gallon.

Following prices represent majority of sales made on Group 3 freight basis, although shipments may originate in other refining districts such as North and West Texas, Arkansas, Louisiana, Indiana, Illinois, Kentucky, etc.

	Prices Aug. 4	Prices July 28	Prices July 21
58-60 U. S. Motor, 437 e.p.	5.875– 6.125	5.875– 6.25	5.875– 6.25
60-62 437 e.p. gasoline	6.00 – 6.25	6.00 – 6.375	6.00 – 6.375
60-62 400 e.p. gasoline	6.125– 6.50	6.125– 6.50	6.25 – 6.75
64-66 375 e.p. gasoline	6.75 – 7.00	6.75 – 7.00	6.875– 7.25
68-70 350-360 e.p. gasoline	7.25 – 7.50	7.25 – 7.50	7.25 – 7.50
*Domestic Aviation Gasoline	9.00 – 9.25	9.00 – 9.25	9.00 – 9.25
41-43 w.w. kerosene	3.125– 3.50	3.25 – 3.625	3.25 – 3.625
42-44 w.w. kerosene	3.50 – 4.00	3.875– 4.25	3.875– 4.25
38-40 straw distillate	2.75 – 3.00	2.75 – 3.00	2.75 – 3.00
32-36 ordinary dark gas oil	2.125– 2.375	2.125– 2.375	2.125– 2.375
32-36 dark zero gas oil	2.25 – 2.50	2.25 – 2.50	2.25 – 2.50
32-36 straw zero gas oil	2.625– 2.75	2.625– 2.75	2.625– 2.75
28-30 zero fuel oil (per bbl.)	$0.80 –$0.85	$0.80 –$0.85	$0.825–$0.85
28-30 fuel oil (per bbl.)	$0.80 –$0.85	$0.80 –$0.85	$0.825–$0.85
24-26 fuel oil (per bbl.)	$0.60 –$0.65	$0.60 –$0.65	$0.625–$0.675
18-22 fuel oil, low sulfur (per bbl.)	$0.50 –$0.575	$0.50 –$0.575	$0.50 –$0.575
18-22 fuel oil, high sulfur zero (per bbl.)	$0.50 –$0.575	$0.50 –$0.575	$0.50 –$0.575

*Prices are based on U. S. Gov't specifications or better. Present Gov't specifications require distillation range of 5% recovery at not more than 167° F., and not less than 122° F.; 50% recovery at 221°; 90% at 311°; 96% at 347°; end point 374° F. Gasoline of fighting grade specifications in some instances sells at a premium over domestic aviation grade. Prices represent majority of quotations.

Weighted Average Prices

OKLAHOMA

	Aug. 4		July 28		July 21	
	No. of Cars	Price	No. of Cars	Price	No. of Cars	Price
58-60 U. S. Motor, 437 e.p.	8	6.2500	10	6.4000	8	6.3125
60-62 437 e.p. gasoline	6	6.5417	..	6.50–6.75 (See note)	..	6.375–6.625 (See note)
60-62 400 e.p. gasoline	1	6.7500	..	6.75–7.00 (See note)	..	6.75–7.00 (See note)
64-66 375 e.p. gasoline	..	7.00–7.25 (See note)	..	7.00–7.25 (See note)	..	7.00–7.25 (See note)
58-60 437 e.p. gasoline (Full U. S. Motor specifications not guaranteed.)	..	5.875–6.375	..	5.875–6.375	..	6.00–6.50

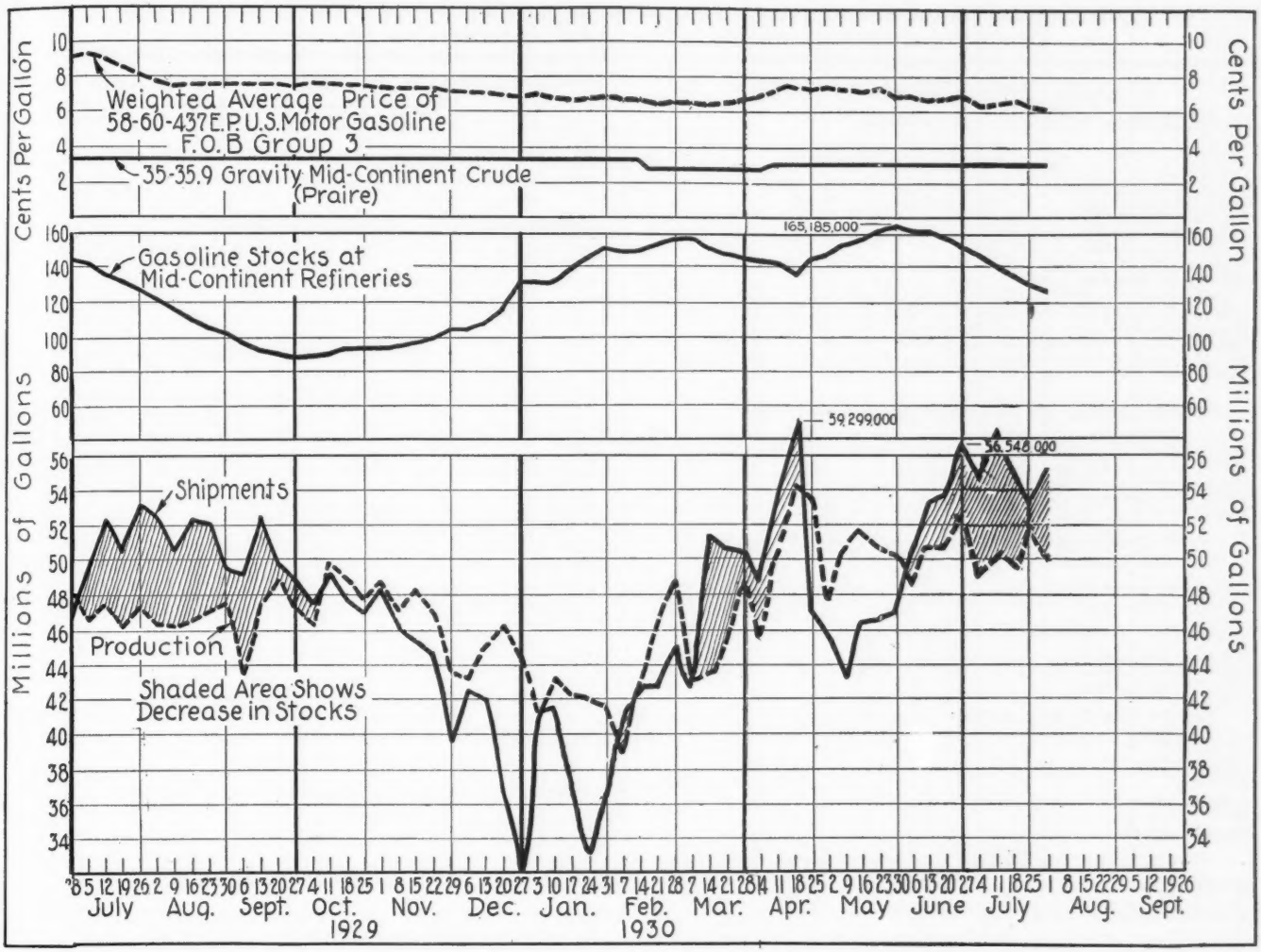
KANSAS

	Aug. 4		July 28		July 21	
	No. of cars	Price	No. of cars	Price	No. of Cars	Price
58-60 U. S. Motor, 437 e.p.	11	6.8974	13	7.2115	12	7.2500

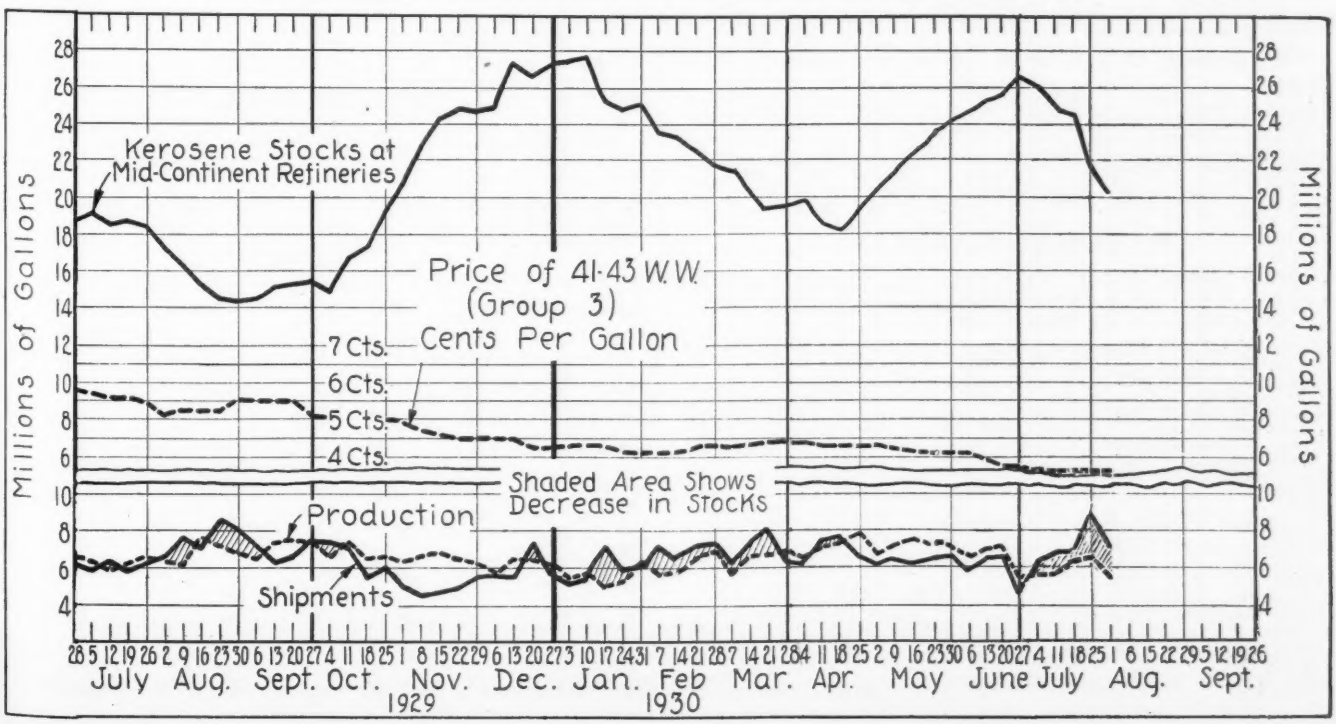
Note: No sales reported for the gasoline marked "see note" on the dates so marked; prices shown on such dates represent majority of quotations only.

Barometer of Mid-Continent Refinery Market—Week Ending August 1

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 93 Plants to National Petroleum News



Prices shown above are extended to date shown in Refinery Market and Crude tables in Market section of this issue and stocks, shipments and Production are extended to date as shown in the table on page 90



Refinery Markets on Light Oils and Lubricants

Prices given below are in cents per gallon, except where $ is shown. They represent prices made only to domestic jobbers who resell to the consuming public, except where otherwise noted.

(These Refinery Prices compiled in the OIL PRICE HANDBOOK for a whole year)

GASOLINE AND NAPHTHA

OKLAHOMA (F. o. b. Oklahoma refineries)

	Prices Aug. 4	Prices July 28	Prices July 21
48-50 450 e.p. naphtha...	6.25	6.25	6.25
50-52 450 e.p. naphtha...	6.25	6.25	6.25
56-58 450 e.p. gasoline...	6.25 – 6.50	6.25 – 6.50	6.25 – 6.50
58-60 450 e.p. gasoline...	6.25 – 6.50	6.25 – 6.50	6.25 – 6.50
64-66 390 e.p. gasoline...	6.75 – 7.25	6.75 – 7.25	6.75 – 7.25
68-70 350-360 e.p. gasoline	7.25 – 7.50	7.25 – 7.50	7.25 – 7.50
‡Domestic Aviation Gasoline.....	8.50 – 9.25	8.50 – 9.25	8.50 – 9.25

‡Prices based on U. S. Gov't. specifications or better. Present Gov't. specifications require distillation range of 5% recovery at not more than 167° F., and not less than 122° F.; 50% rec. at 221°; 90% at 311°; 96% at 347°; end point, 374°F. Fighting grade in some instances sells at a premium over domestic aviation grade.

PENNSYLVANIA (F. o. b. Western Pennsylvania refineries)

52-54 Naphtha.....	7.00 – 7.50	7.25 – 7.75	7.50 – 7.75
54-56 Naphtha.....	7.00 – 7.50	7.25 – 7.75	7.50 – 7.75
58-60 U.S. Motor 437 e.p.	7.25 – 8.00	7.50 – 8.25	7.75 – 8.25
60-62 400-410 e.p. gasoline	7.50 – 8.125	7.75 – 8.50	8.00 – 8.50
64-66 390 e.p. gasoline....	8.00 – 8.75	8.125– 9.00	8.125– 9.00
68-70 350-360 e.p.....	8.50 – 9.125	8 50 – 9.25	8.75 – 9.25

OHIO (Quotations of S. O. Ohio. 4c state tax to be added.)

U. S. Motor Gasoline

Ohio, delivery at any point.....	11.00	11.00	11.00

KANSAS (F. o. b. refinery Kansas destination)

60-62 437 e.p. gasoline...	7.25	7.25 – 7.50	7.25 – 7.50
60-62 400 e.p. gasoline...	7.50	7.50 – 7.75	7.50 – 7.75
64-66 375 e.p. gasoline...	7.75	8.00 – 8.25	8.00 – 8.25

NORTH TEXAS (F. o. b. North Texas refineries)

56-58 450 e.p. gasoline...	5.75	5.75	5.75
58-60 450 e.p. gasoline...	5.75	5.75	5.75
58-60 U.S. Motor 437 e.p.	5.875– 6.25	6.00	5.75 – 6.00
60-62 400 e.p. gasoline...	6.25 – 6.50	6.25 – 6.50	6.25 – 6.50
64-66 390 e.p. gasoline...	6.75	6.75	6.75
64-66 375 e.p. gasoline...	7.00	7.00	7.00
68-70 350-360 e.p. gasoline	7.25	7.25	7.25

****WEST TEXAS** (F. o. b. West Texas refinery, for unrestricted shipment)

*50-52 naphtha.....	5.50	5.75	5.75
58-60 437 e.p. gasoline...	5.75	5.75 – 6.00	5.75 – 6.00
58-60 U.S. Motor 437 e.p. gasoline.....	5.75 – 6.25	6.00 – 6.25	6.00 – 6.25

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

58-60 U.S. Motor 437 e. p.	6.75	6.75	6.75

ARKANSAS (Ark., N. La. and Miss. destination)

58-60 U.S. Motor 437 e.p.	6.75	6.75	6.75

CALIFORNIA (3c tax to be added to California gasoline prices if used in state.)

54-58 U.S. Motor 437 e.p.	8.50 –10.50	9.50 –11.50	9.50 –11.50
54-58 U.S. Motor, for outside state shipment....	7.50 – 8.75	7.50 – 9.00	7.50 – 8.75
58-61 375-400 e.p. gasoline	9.50 –11.00	10.50 –12.50	10.50 –12.50
42-45 Engine Distillate 445-480 e.p.....	8.00 – 9.00	8.50 – 9.50	8.00 – 9.00

NATURAL GASOLINE

(Note: End point of all grades, not over 375 F. Corrosion test adopted Oct. 1, 1927; A.S.T.M. Method D130-27T; doctor test, July 2, 1928.)

OKLAHOMA (F. o. b. Oklahoma refineries)

Grade AA, 80-87.9, 90% Recovery.....	5.00	4.75	4.25 – 4.50
Grade A, 72-79.9, 90% Recovery.....	5.00	4.75	4.25 – 4.50
Grade BB, 84-92, 85% Recovery.....	5.00	4.50	4.25
Grade B, 76-83.9, 85% Recovery.....	5.00	4.50	4.25
Grade C, 80-92, 78% Recovery.....	5.00	4.50	4.25

NORTH TEXAS (F. o. b. Breckenridge)

Grade AA, 80-87.9, 90% Recovery.....	5.00	4.75	4.25 – 4.50
Grade A, 72-79.9, 90% Recovery.....	5.00	4.75	4.25 – 4.50
Grade BB, 84-92, 85% Recovery.....	5.00	4.50	4.25
Grade B, 76-83.9, 85% Recovery.....	5.00	4.50	4.25
Grade C, 80-92, 78% Recovery.....	5.00	4.50	4.25

NORTH LOUISIANA (F. o. b. Monroe District)

	Prices Aug. 4	Prices July 28	Prices July 21
Grade AA.....	†5.00	†4.75	†4.50
Grade BB.....	†5.00	†4.50	†4.25
Grade C.....	†5.00	†4.50	†4.25

CALIFORNIA (F. o. b. California refineries)

75-85, 375-390 e.p. blend	7.00 – 8.25	7.00 – 8.25	7.50 – 8.25

BURNING OILS

PENNSYLVANIA (F. o. b. Western Pennsylvania refineries)

45 w.w. kerosene.....	4.25 – 4.75	4.375– 4.75	4.375– 4.75
46 w.w. kerosene.....	4.75 – 5.00	4.75 – 5.00	4.75 – 5.00
47 w.w. kerosene.....	5.00 – 5.50	5.125– 5.50	5.125– 5.50
300 mineral seal.....	5.50 – 6.00	5.50 – 6.00	5.50 – 6.00

OKLAHOMA (F. o. b. Oklahoma refineries)

41-43 w.w. kerosene.....	3.25 – 3.75	3.25 – 3.75	3.375– 3.75
42-44 w.w. kerosene.....	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25

KANSAS (F. o. b. refinery Kansas destination)

41-43 w.w. kerosene.....	4.25 – 4.50	4.50 – 4.75	4.50 – 4.75
42-44 w.w. kerosene.....	4.75 – 5.00	5.00 – 5.25	5.00 – 5.25

NORTH TEXAS (F. o. b. North Texas refineries)

40-42 w.w. kerosene.....	3.00	3.00	3.00
41-43 w.w. kerosene.....	3.00 – 3.25	3.00 – 3.25	3.00 – 3.25

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

41-43 w.w. kerosene.....	4.00 – 4.25	4.25	4.25
42-44 w.w. kerosene.....	4.50	4.50	4.50

ARKANSAS (Ark., N. La. and Miss. destination)

‡41-43 w.w. kerosene.	3.75	4.125	4.125

‡Changed from 42-44 w. w. to 41-43 w. w. kerosene, Aug. 4.

CALIFORNIA (F. o. b. California refineries)

38-40 w.w. kerosene.....	4.25 – 4.50	4.00 – 5.00	4.00 – 5.00

NEUTRAL OIL

PENNSYLVANIA (F. o. b. Western Pennsylvania refineries)

Vis.		(Viscosity at 70° F.)		
200 No. 3 Assoc. Filt....	18.00 –21.00	19.00 –21.00	19 00 –21 00
180 No. 3 Assoc. Filt....	16.25 –17.50	16.50 –17.50	16.50 –17 50
150 No. 3 Assoc. Filt....	12.25 –14.00	12.25 –14.00	12.25 –14.00
		(Non Viscous)	
34 Grav. 330-340 Flash..	5.75 – 6.50	5.75 – 6.50	5.75 – 6.50

****MID-CONTINENT** (F. o. b. Mid-Continent refineries)

Vis.	Color	(Viscosity at 100° F.)		
100—No. 2.....		6.00 – 7.00	6.00 – 7.00	6.00 – 7.00
150—No. 3.....		8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
150—No. 4.....		7.00 – 8.00	7.00 – 8.00	7.00 – 8.00
180—No. 3.....		9.00 –10.00	9.00 –10.00	9.00 –10.00
180—No. 4.....		9.00 – 9.50	9.00 – 9.50	9.00 – 9.50
180—No. 5.....		8.50 – 9.00	8.50 – 9.00	8.50 – 9.00
200—No. 3.....		11.00 –11.50	11.50	11.50
200—No. 4.....		10.00 –11.00	10.00 –11.00	10.00 –11 00
200—No. 5.....		10.50	10.50	10.50
220—No. 3.....		12.50 –13.50	12.50 –13.50	12.50 –13.50
220—No. 4.....		12.00 –12.50	12.00 –12.50	12.00 –12.50
220—No. 5.....		11.00 –12.00	11.00 –12.00	11.00 –12.00
240—No. 3.....		13.50 –15.00	13.50 –15.00	13.50 –15 00
240—No. 4.....		12.50 –14.00	12.50 –14.00	12.50 –14.00
240—No. 5.....		12.00 –13.00	12.00 –13.00	12.00 –13.00
280—No. 3.....		17.00	17.00	17.00
280—No. 4.....		15.00 –16.00	15.00 –16.00	15.00 –16.00
280—No. 5.....		14.00 –15.00	14.00 –15.00	14.00 –15.00

†Prices nominal ††Only one refiner quoting *Quotations only **Represents Both Sales and Quotations.

Refinery Markets Wax, Lubricants, Heavy Oil

Prices given below are in cents per gallon, except where $ is shown. They represent prices made only to domestic jobbers who resell to the consuming public, except where otherwise noted.

(For quick reference to Refinery Prices, get the OIL PRICE HANDBOOK, published annually)

GULF COASTAL (F. o. b. Gulf Coastal refineries)

Vis.	Color	Prices Aug. 4	Prices July 28	Prices July 21
		(Viscosity at 100° F., pour test 0)		
100	No. 2 Pale	6.50 – 7.00	6.50 – 7.00	6.50 – 7.00
200	No. 3 Pale	9.50 – 9.75	9.50 – 9.75	9.50 – 9.75
300	No. 3 Pale	10.75 –11.00	10.75 –11.00	10.75 –11.00
500	No. 3½ Pale	12.00 –12.25	12.00 –12.25	12.00 –12.25
750	No. 4 Pale	13.50 –13.75	13.50 –13.75	13.50 –13.75
1200	No. 5 Pale	16.00 –16.50	16.00 –16.50	16.00 –16.50
2000	No. 4 Pale	17.00 –17.50	17.00 –17.50	17.00 –17.50
200	No. 5½ Red Oil	8.75 – 9.00	8.75 – 9.00	8.75 – 9.00
300	No. 5½ Red Oil	10.00 –10.25	10.00 –10.25	10.00 –10.25
500	No. 6 Red Oil	11.25 –11.50	11.25 –11.50	11.25 –11.50
750	No. 6 Red Oil	12.75 –13.00	12.75 –13.00	12.75 –13.00
1200	No. 5-6 Red Oil	15.00 –15.25	15.00 –15.25	15.00 –15.25
2000	No. 6 Plus Red Oil	17.00 –17.50	17.00 –17.50	17.00 –17.50

†CALIFORNIA (F. o. b. California refineries)

Vis.	Color	(Viscosity at 100° F.)		
100	No. 3	9.50 –10.00	9.50 –10.00	9.50 –10.00
200	No. 3	11.50	11.50	11.50
300	No. 3	13.00	13.00	13.00
450	No. 3	15.50	15.50	15.50
550	No 3	16.50	16.50	16.50
600	No. 3	17.00	17.00	17.00
200	No. 5	11.00	11.00	11.00
300	No. 5	12.00	12.00	12.00
400	No. 5	14.00	14.00	14.00
500	No. 5	15.00	15.00	15.00
600	No. 5	16.00	16.00	16.00
700	No. 7	18.00	18.00	18.00

†Neutral oils not manufactured commercially in California.

CYLINDER STOCKS

MID-CONTINENT (F. o. b. Mid-Continent refineries)

(Bright stock prices represent quotations to domestic jobbers only.)

190-200 Vis. D at 210° Brt. St.	33.00	33.00	33.00
150-160 Vis. D at 210° Brt. St., 15-20 cold test	28.00	28.00	28.00
150-160 Vis. D Brt. Stock, 25-45 cold test	27.00	27.00	27.00
150-160 Vis. E 210° Brt. St.	26.00	26 00	26.00
600 St. Ref. Olive Green	9.00	9.00	9.00
600 St. Ref. Dark Green	8.00 – 9.00	8.00 – 9.00	8.00 – 9.00
Black Oil	5.00	5.00	5.00

PENNSYLVANIA (F. o. b. Western Penna. refineries) (A.S.T.M. Tests)

600 Steam Refined, filterable	11.00	10.00 –11.00	10.00 –11.00
650 Steam Refined	15.00 –17.00	15.00 –17.00	16.00 –18.00
600 Flash	18.00 –21.00	19.50 –21.00	20.00 –21.00
630 Flash	25.50 –28.00	25.50 –28.00	28.00 –29.00
600 Warren E	17.00 –18.00	17.00 –18.00	17.00 –18.00
600 Oil City E	16.00 –17.00	16.00 –17.00	16.00 –17.00
600 D Filtered	20.00 –22.00	20.00 –22.00	21.00 –22.00
Cold Test Stock, 40-50 p. p., 140-150 vis. at 210° 540-550 flash, No. 8 color	25.00 –26.00	25.00 –26.00	25.00 –26.00
40-50 p.p., 140-150 vis. at 210°, 540-550 flash, No. 6-6½ color diluted	23.00 –24.00	23.00 –24.00	23.00 –24.00

WAX

PENNSYLVANIA (Per pound, F. o. b. New York)

122-124 white crude scale, a.m.p.	2.125– 2.25	2.125– 2.25	2.125– 2.25
124-126 white crude scale, a.m.p.	2.125– 2.25	2.125– 2.25	2.125– 2.25

****OKLAHOMA** (Per pound in barrels; in a few instances, per pound in burlap bags; F. o. b. Oklahoma refineries)

124-126 White Crude Scale, a.m.p.	1.75 – 2.00	1.75 – 2.00	1.75 – 2.00

DISTILLATE, GAS AND FUEL OIL

PENNSYLVANIA (For outside Pittsburgh district)

36-40 fuel oil	3.25 – 3.50	3.125– 3.50	3.125– 3.50
30-34 fuel oil	3.125– 3.25	3.125– 3.25	3.125– 3.25
28-32 fuel oil	3.125– 3.25	3.125– 3.25	3.125– 3.25

OKLAHOMA (F. o. b. Oklahoma refineries)

	Prices Aug. 4	Prices July 28	Prices July 21
38-40 straw distillate	2.875– 3.125	2.875– 3.125	2.875– 3.125
36-38 straw distillate	2.75 – 2.875	2.75 – 2.875	2.75 – 2.875
32-36 straw gas oil	2.375– 2.50	2.375– 2.50	2.375– 2.50
32-36 straw gas oil zero	2.625– 2.75	2.625– 2.75	2.625– 2.75
32-36 dark gas oil	2.125– 2.375	2.125– 2.375	2.125– 2.375
32-36 dark gas oil zero	2.375– 2.50	2.375– 2.50	2.375– 2.50
28-30 zero fuel oil (per bbl.)	$0.85 – 0.90	$0.85 – 0.90	$0.85 – 0.90
28-30 fuel oil (per bbl.)	$0.80 – 0.85	$0.80 – 0.85	$0.80 – 0.85
26-28 fuel oil (per bbl.)	$0.70 – 0.75	$0.70 – 0.75	$0.70 – 0.75
24-26 fuel oil (per bbl.)	$0.60 – 0.70	$0.60 – 0.70	$0.60 – 0.70
22-26 fuel oil (per bbl.)	$0.60 – 0.65	$0.60 – 0.65	$0.60 – 0.65
18-22 fuel oil (per bbl.)	$0.475– 0.525	$0.475– 0.525	$0.475– 0.525
16-20 fuel oil (per bbl.)	$0.425– 0.475	$0.425– 0.475	$0.425– 0.475
14-16 fuel oil (per bbl.)	$0.40 – 0.45	$0.40 – 0.45	$0.40 – 0.45

KANSAS (F. o. b. refinery Kansas destination)

38-40 straw distillate	3.25 – 3.50	3.25 – 3.50	3.25 – 3.50
36-38 straw distillate	3.00	3.00	3.00
32-36 straw gas oil	3.00	3.00	3.00
18-22 fuel oil (per bbl.)	$0.70 – 0.75	$0.70 – 0.75	$0.70 – 0.75
10-14 fuel oil (per bbl.)	$0.55 – 0.65	$0.55 – 0.65	$0.55 – 0.65

NORTH TEXAS (F. o. b. North Texas refineries)

38-40 straw distillate	2.75 – 3.00	2.75 – 3.00	2.75 – 3.00
38-40 p.w. treated distillate	3.125– 3.25	3.125– 3.25	3.125– 3.25
32-36 gas oil, cracked	2.00 – 2.375	2.00 – 2.375	2.00 – 2.375
32-36 St. reduced gas oil	2.00 – 2.25	2.00 – 2.25	2.00 – 2.25
24-26 fuel oil (per bbl.)	$0.50 –$0.55	$0.50 –$0.55	$0.50 –$0.55
20-24 fuel oil (per bbl.)	$0.45 –$0.50	$0.45 –$0.50	$0.45 –$0.50
18-22 fuel oil (per bbl.)	$0.40 –$0.45	$0.40 –$0.45	$0.40 –$0.45

****WEST TEXAS** (F. o. b. West Texas refinery, or unrestricted shipment)

34-38 gas oil	2.25 – 2.50	2.25 – 2.50	2.25 – 2.50
30-32 gas oil	1.875– 2.125	1.875– 2.125	1.875– 2.125
28-30 zero gas oil	2.25 – 2.50	2.25 – 2.50	2.25 – 2.50
18-22 fuel oil (per bbl.)	$0.50 –$0.60	$0.50 –$0.60	$0.50 –$0.60

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

32-36 gas oil, dark	2.75	2.75	2.50
30-32 gas oil, straw	2.75	2.75	2.50
14-16 fuel oil (per bbl.)	$0.75 – 0.85	$0.75 – 0.85	$0.75 – 0.85

ARKANSAS (Ark., N. La. and Miss. destination)

30-32 gas oil, straw	2.50	2.50	2.50
32-36 dark gas oil	2.75	2.50	2.50
28-30 gas oil	2.50	2.50	2.50
20-24 fuel oil (per bbl.)	$0.95	$0.95	$0.95
9-12 fuel oil (per bbl.)	$0.75	$0.75	$0.75
Black oil	3.25	3.25	3.25

CALIFORNIA (F. o. b. San Joaquin Valley. Nominal pipe line charge to San Francisco 24c per bbl. more and to San Pedro 20c per bbl. more.)

14-18 fuel oil (per bbl.)	$0.45 –$0.65	$0.45 –$0.65	$0.45 –$0.65
14-18 Bunker oil (per bbl.)	$0.70 –$0.80	$0.70 –$0.80	$0.70 –$0.80
30-34 gas oil (per bbl.)	$0.85 –$1.00	$0.80 –$1.00	$0.85 –$1.00
27 Plus Diesel oil (per bbl.)	$0.85 –$1.00	$0.80 –$1.00	$0.85 –$1.00

PETROLATUMS

PENNSYLVANIA (Per pound, in barrels, carload lots, f. o. b. refinery. In tank cars ½c to ¾c per pound less.) Two refiners quoting.

Snow White	8.25 – 8.50	8.25 – 8.50	8.25 – 8.50
Lily White	7.25 – 7.50	7.25 – 7.50	7.25 – 7.50
Cream White	6.25 – 6.50	6.25 – 6.50	6.25 – 6.50
Light Amber	3.25 – 3.625	3.25 – 3.625	3.25 – 3.625
Amber	3.00 – 3.375	3.00 – 3.375	3.00 – 3.375
Red	2.75 – 3.00	2.75 – 3.00	2.75 – 3.00

PETROLEUM COKE

****OKLAHOMA** (F. o. b. Oklahoma refineries)

(Per ton in car lots)

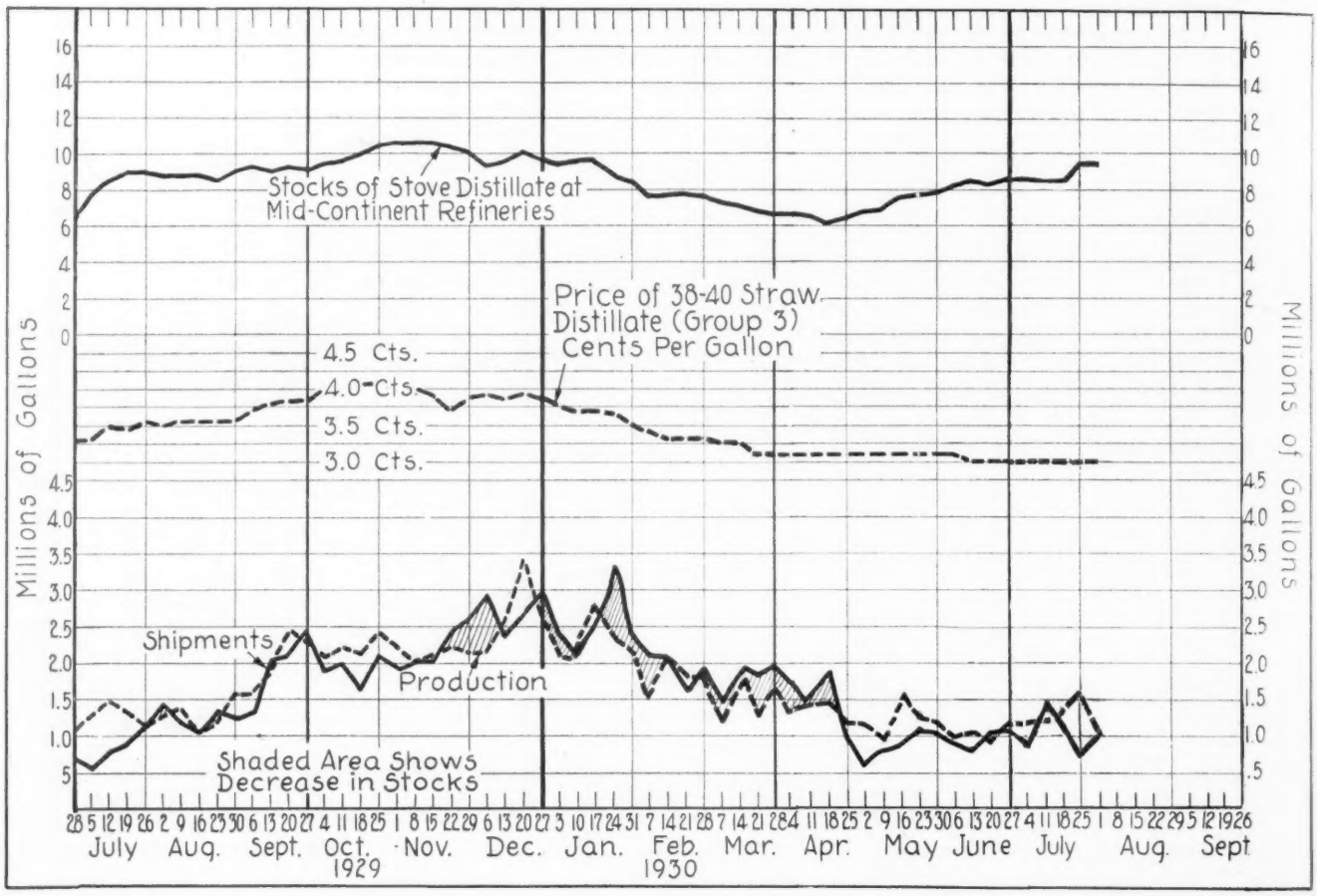
Lump	$4.50 –$5.00	$4.50 –$5.00	$4.50 –$5.00
Still run	$3.00	$3.00	$3.00
Breeze	$2.00	$2.00	$2.00

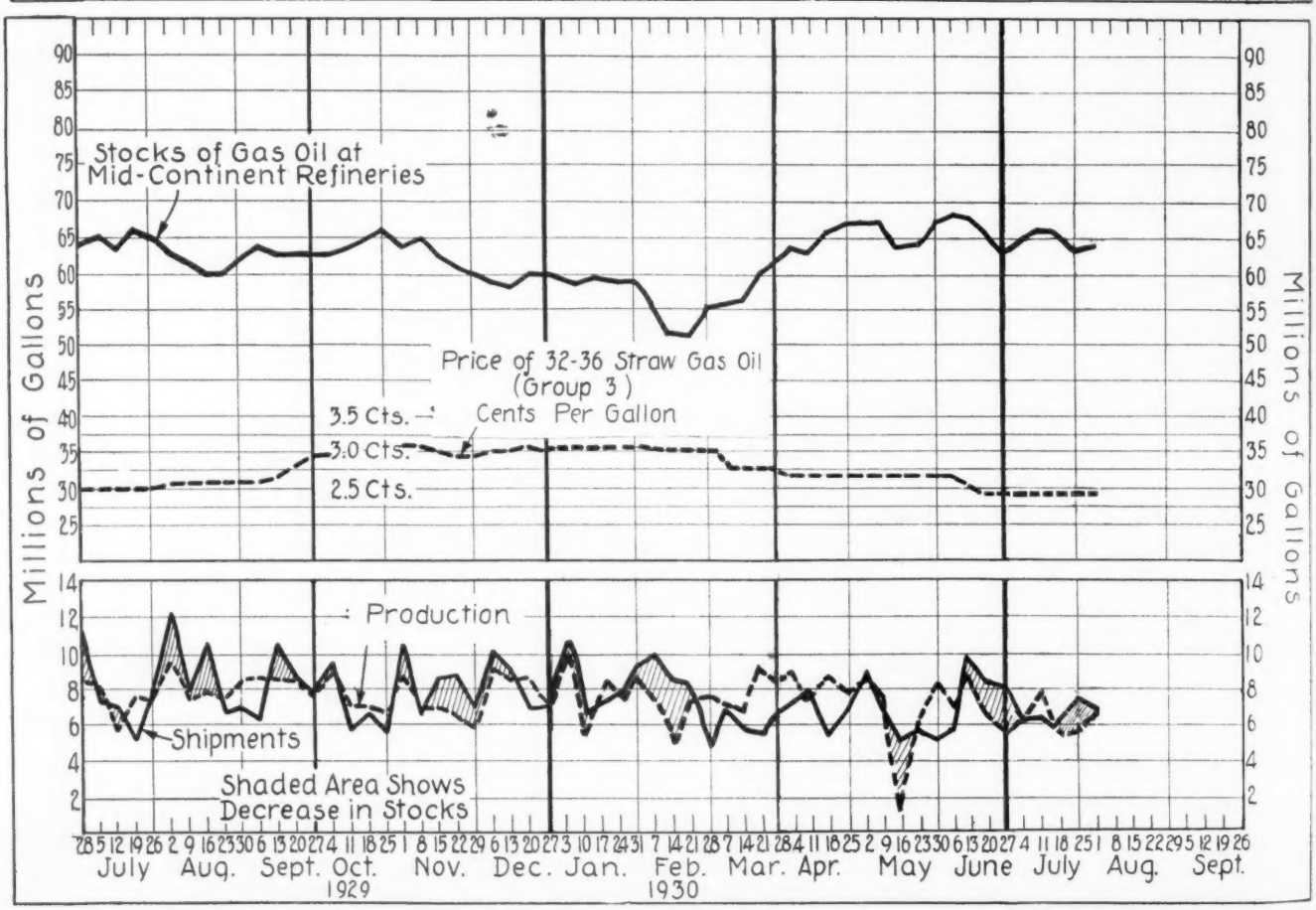
†Prices nominal ††Only one refiner quoting *Quotations only

**Represents Both Sales and Quotations.

Barometer of Mid-Continent Refinery Market—Week Ending August 1

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 93 Plants to National Petroleum News


Stocks of Stove Distillate at Mid-Continent Refineries
Price of 38-40 Straw Distillate (Group 3) Cents Per Gallon
4.5 Cts.
4.0 Cts.
3.5 Cts.
3.0 Cts.
Shipments
Production
Shaded Area Shows Decrease in Stocks
Millions of Gallons
July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept
1929
1930


Stocks of Gas Oil at Mid-Continent Refineries
Price of 32-36 Straw Gas Oil (Group 3) Cents Per Gallon
3.5 Cts.
3.0 Cts.
2.5 Cts.
Production
Shipments
Shaded Area Shows Decrease in Stocks
Millions of Gallons
July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept.
1929
1930

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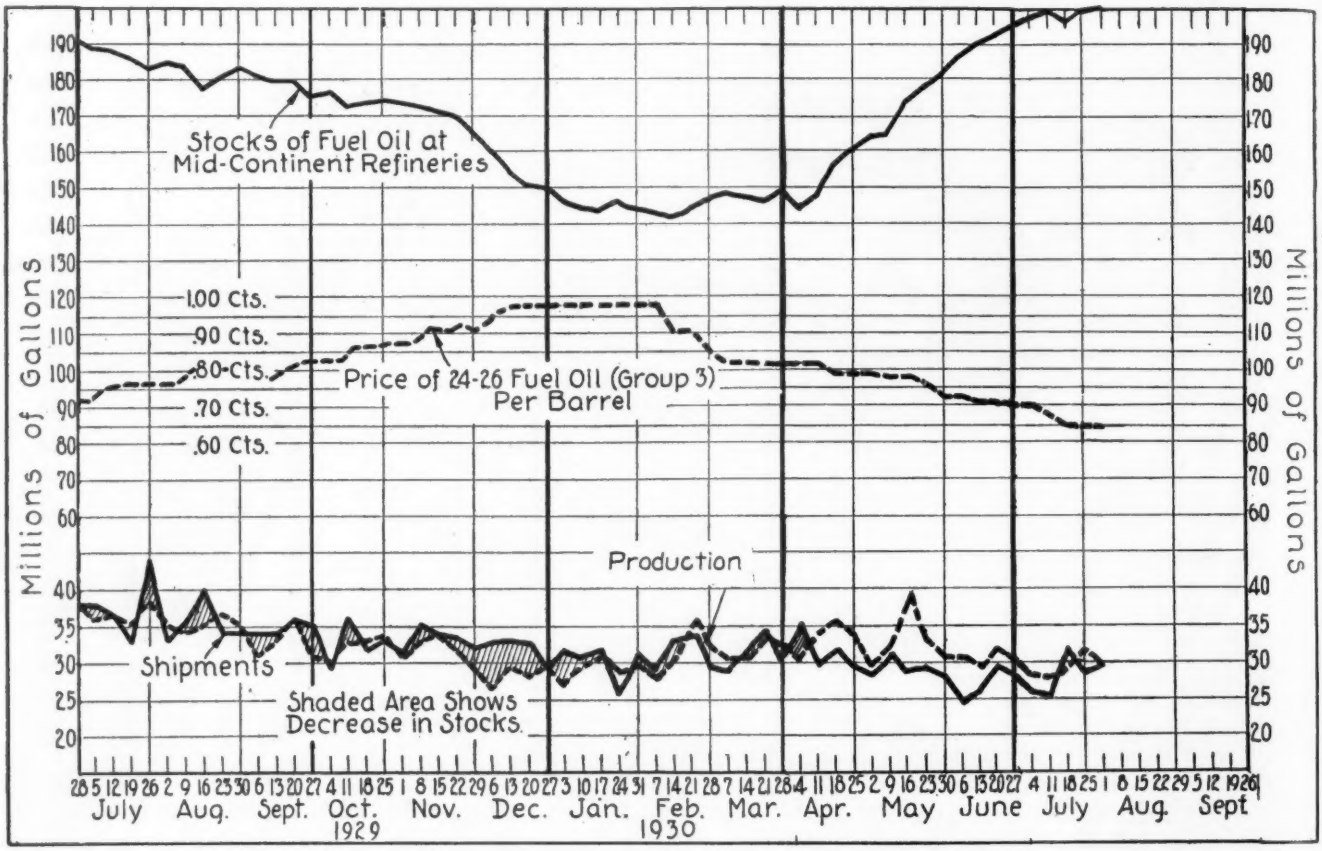
Barometer of Mid-Continent Refinery Market—Week Ending August 1

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 93 Plants to National Petroleum News



California Refinery Market

Foreign Gasoline Buyers Inactive

LOS ANGELES, July 31

INTEREST in Pacific Coast markets the past week was confined chiefly to trends of commodities for domestic shipment. Foreign buyers reported in the local market last week failed to place a single order and no new business appeared to indicate an upward trend of export shipments within the coming week.

No confirmation could be obtained of the report by an east coast buyer that two cargoes of California gasoline were available at slightly less than 6.50 f.o.b. the west coast. Members of the local trade scouted the report as an effort to disturb the market.

It is rumored that a major California company has adopted the policy of selling a near 400 e.p. gasoline for U. S. motor prices. According to the report the goods has an end point of about 407 and sells for 0.75 cent under Export Association prices on 400 e. p. gasoline. This would net back approximately 7.00 cents f.o.b. the Pacific Coast. Quotations on this basis were reported made to inquiries from buyers in the United Kingdom. Although no appreciable change was made in export quotations, increased activity in heavy oils caused a slight advance in average prices. One member of the trade said he was asking $0.90 per barrel for barge delivery of Diesel oil for bunkering and would shade this price only a few cents in cargo lots. A quotation of $0.90 was also made on approximately 4000 barrels of gas-oil in San Pedro harbor.

Numerous inquiries received from Far East buyers a week ago for California cased gasoline and kerosene, were still hanging fire. Movement of these commodities to the Orient is considered likely only to those factions opposed to the government. Regular consumers under contract are expected to continue buying as before the political disturbance.

Small refiners with apparently no control over their retail outlets continued to jeopardize the California retail markets. Motor fuel could be bought from independent stations in the Los Angeles Basin for 15 cents a gallon, 4.50 cents under the price maintained by stations handling major products.

This unrest in the retail situation has affected quotations on tank car movement of U. S. Motor. Prices were shaded 0.50 cent for this type of delivery within the state, bringing the price range down to 8.50 to 10.50 cents. The 8.50 cent goods moved in most cases to points outside the Los Angeles Basin as major and most independent refiners endeavored to sustain retail prices in this territory.

For shipment into adjoining states, quotations were 7.50 to 8.75 cents. One dealer reported quotation of 7.50

cents on ten cars of gasoline to an out of state buyer only to lose the business to a competitor. A few cars were reported shipped into competitive territory at 7.25 cents, but the average price ranged higher.

Curtailment of refinery runs by independent refiners has caused a dearth of fuel oil. While a few spot sales were made at under $0.50 per barrel, members of the domestic trade said prices in general, ranged from $0.50 to $0.60, with several quotations made above these figures.

Other domestic prices remained practically unchanged. Natural gasoline and kerosene demand was reported off with quotations 7 to 8.25 and 4.25 to 5.50 respectively.

Pennsylvania Markets

Fuel Oil More Active

CLEVELAND, Aug. 4.—Fuel oil was the most active commodity in the Pennsylvania market last week. Indications were that industrial buying had been resumed on at least a slightly larger scale. Gasoline shipments continued at a high rate but they had little effect on the downward trend of prices. Other commodities were quiet.

Reports from traders in virtually all sections of the field gave evidence of a better tone in the fuel oil market. Some sellers interpreted the buying from industrial users as a turn for the better in general business conditions.

Brokers in some districts reported some difficulty in covering on sales of fuel oil at 3.125 cents. Several sales of 5 to 10 car-lots were reported by refiners at 3.25 cents a gallon. One or two refiners reported they would have no more fuel oil to offer until Sept. 1.

Spot demand for gasoline was a shade better and contract shipments were breaking all records, according to the reports from refiners and brokers. Prices, however, were down 0.25 to 0.50 cent with U. S. Motor selling at 7.25 cents a gallon in the Warren and Oil City districts.

Kerosene were off 0.125 cent on the lows of price ranges, the 45 w.w. grade being offered at 4.25 cents a gallon.

Demand for cylinder stocks and bright stock remained quiet. Prices were generally unchanged although good filterable 600 steam refined was offered more sparingly under 11 cents.

CLEVELAND, Aug. 2. — Cities Service Oil Co. of Ohio has bought the Defiance Oil Co., Defiance, O., which has a bulk plant and several service stations. Possession was taken Aug. 1.

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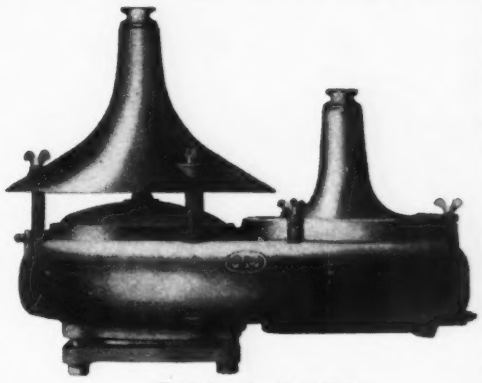

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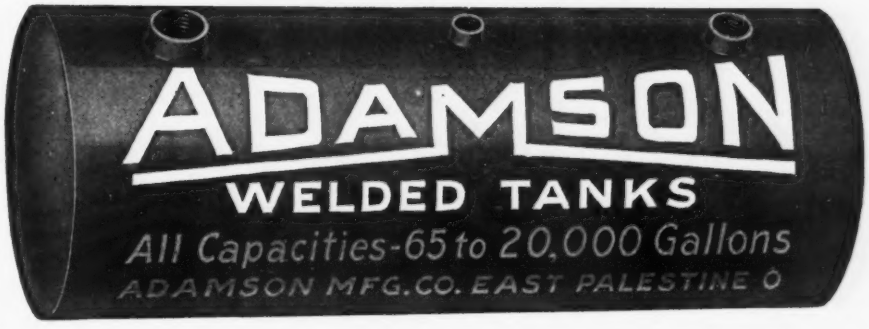


Eastern Domestic Markets

Price Cutting Forces Quotations Down

Staff Special
NEW YORK, Aug. 2.

PRICE cutting occurred in several sections along the Atlantic seaboard market with greater frequency the past week with the result that prices for gasoline in these districts were lower. Spot demand light in all sections. Contract shipments were heavy. Prices for kerosene and other oils were unchanged.

Lower gasoline prices were confined to the northern part of the seaboard. Quotations for U. S. Motor were approximately 0.25 cent however for delivery in the Portland, Boston and Providence districts. U. S. Motor was lower in Baltimore also, although California U. S. Motor prices had not been unaffected up to the end of the week. Both California gasoline and regular U. S. Motor were lower at New York harbor and in the Philadelphia district.

New York prices for U. S. Motor dropped 0.25 cent on the high of the price range to 8.75 cents. The majority of refiners quoted from this price down to 8.25 cents both for immediate and over August delivery.

The majority of sellers in the harbor reported spot demand light. Keen competition for what spot business was available resulted in reports of shading throughout the week. One of the principal factors in the New York market was said to have abnormal reserves and was sacrificing on price to reduce his stocks. Quotations over August at 8 cents and less have been reported made on barge business. These reports lacked confirmation.

Some cheap gasoline was said to be moving into Pennsylvania from New York. However, one seller in the harbor reported that one of his Pennsylvania salesmen had taken orders for 70 cars to move early in August at 8.25 cents.

Virtually the same conditions existed in New England as at New York. Refiners were selling in the Boston district at 9.25 cents delivered; the Portland district at 10 cents and Providence district at 9.30 cents. Demand was reported light and the lower prices the result of keen competition for gallonage. One refiner said gasoline of inferior quality was being delivered in the Boston area in tank wagon lots at exceptionally low prices. A barge load of gasoline was sold to a Boston jobber early in the week at 8.25 cents, delivered.

August business in the Philadelphia district was slow according to reports but a few orders had been taken by refiners at current quotations of 8.25 to 9 cents for U. S. Motor. One of the major refiners said that his quotations varied and that he was meeting "legitimate" competition. He indicated he would shade tank car prices for barge movement, the amount of shading depending upon the buyer and the amount of material involved.

Quotations at Baltimore were on the same basis as Philadelphia, although there was no shading reported of current tank car prices.

California gasoline quotations at New York ranged down to 8.25 cents. The minimum quotation at Philadelphia was 8.50 cents. In both districts the top of the price range was 9 cents. Baltimore prices were unchanged compared with a week ago although lower prices in other districts were having an adverse effect on the market there.

Gulf Coastal Lubes Unchanged

HOUSTON, Aug. 4.—Gulf Coastal lubricant manufacturers have made no changes in their spot quotations and are looking ahead to contract buying for winter requirements of jobbers as their principal future business. Summer demand is in line with expectations.

Gulf Coast Markets

French Buyer Seeks Two Mixed Cargoes

Staff Special
NEW YORK, Aug. 2.

AN INQUIRY for two cargoes of gasoline from a French buyer featured Gulf markets the past week. Low prices for cased gasoline and kerosene in California caused a reduction in prices for those commodities at the Gulf. Prices of other products were unchanged. Domestic markets were quiet although an unconfirmed report was heard that an east coast refiner was seeking a large quantity of gas oil.

The French inquiry specified approximately 50,000 barrels of 64-66, 375 end point gasoline for August loading and approximately 75,000 barrels of 64-66, 375 end point gasoline, U. S. Motor and kerosene for September loading. The grade of kerosene desired could not be learned definitely, although it was understood to be 41-43 prime white.

An east coast refiner who sells this buyer the larger portion of his spot purchases received the inquiry early in the week. He cabled that he desired quotations on the following day. He also indicated that other sellers would have a chance to quote on the business. The refiner quoted Association prices and had not obtained the order up to Aug. 2.

A London broker also was said to have quoted the account and offered to fill out the cargoes at considerably under the Association's postings. According to the trade, the broker offered the following prices f.o.b. the Gulf: U. S. Motor, 7.25 cents; 64-66, 375 end point gasoline, 8.25 cents; 41-43 prime white kerosene, 4.875 cents and 44 water white kerosene, 5.875 cents.

Inasmuch as the buyer seemed anxious to get the goods moving at once, many of the trade believed their opinions were borne out that foreign buyers were operating with very low stocks. They expect a general replenishing of foreign storage in the near future and believe a goodly portion of the business will be placed with American refiners.

The Far East and South American trade have been taking advantage of low prices for cased goods in California and have made several purchases there in the past two weeks. To keep in the running on the South American business, Gulf refiners have their prices accordingly. At the end of the week the general quotation for U. S. Motor in cases was $1.80; 64-66, 375 end point gasoline, $1.90; water white kerosene, $1.60; and prime white kerosene, $1.50. One refiner reported selling a small lot of kerosene to the West Indies since he reduced prices.

The heavy oil market at the Gulf took on new life when it was reported that an east coast refiner was seeking 350,000 barrels of gas oil to move in consecutive voyages to New England. The report could not be confirmed although it was said that ships to move the goods already had been chartered at Houston.

Wax Markets

Buying Activity Increases

NEW YORK, August 2.—Wax markets were more active the past week. Foreign buyers sought both crude scale and fully refined wax in the New York and New Orleans markets in substantial quantities for spot and deferred shipment. Prices were firm and for the most part unchanged.

Crude scale wax prices remained at last week's levels—2.125 cents for yellow and 2.125 to 2.25 cents for both grades of white. The 4-cent quotation for 130-132 fully refined disappeared from the New York market at the end of the week and 135-137 A.m.p. fully refined was offered by majority of sellers at 4.625 cents, a decline of 0.125 cent. The former grade was quoted at 3.75 cents flat.

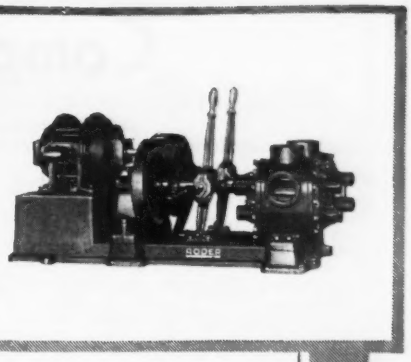
Numerous inquiries were received in both markets from abroad, principally from South America and England. Buyers inquired for white crude scale in lots of 20 to 50 tons for spot, and from 30 to 100 tons per month for deferred shipment. Some of this business was placed while some went begging for the reason that bids were extremely low.

A Mid-Continent manufacturer of white crude scale sold a small lot to Chile and reported he could have disposed of his plant's output for the next three or four months at today's market. His views of the market were optimistic however, and, being in a good position with regard to stocks, refused the business.

On the other hand a New York trader was bid by an English account, 3.27 cents f.a.s. New York, for 128-130 A.m.p. fully refined. The low quotation range for that grade was 3.50 cents both at the Gulf and New York and refiners were unwilling to shade, the trader reported. Most refiners were asking only a few points lower for 125-127 A.m.p. The account wanted only 30 tons for prompt shipment which might have had some bearing on the price.

White crude scale was available from only a few Pennsylvania refiners at 2.125 cents, the trade reported. And only in limited quantities for prompt shipment. The flurry of buying two weeks ago cleaned some of the smaller refiners out and the larger ones were asking the top of the market. A New York broker reported he was unable to purchase 300 tons for shipment from September to December at 2.15 cents, f.a.s. ship at New York harbor.

A Pennsylvania refiner offered white crude scale at 1.50 cents, in tank cars, f.o.b. refinery to an east coast account late in the week. This would figure slightly under 2.125 cents f.a.s. New York.



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Complete Seaboard Market

(Export Markets for whole year given in OIL PRICE HANDBOOK. Each volume carries refinery, tank wagon, crude and export markets—complete for the whole year)

Eastern Domestic Market

(Prices for tank car lots, f. o. b. refinery or seaboard terminal, representing majority of sales and quotations. Prices shown below do not include inspection tax levied in some states.)

U. S. MOTOR GASOLINE	Prices Aug. 4	Prices July 28	Prices July 21
New York harbor	8.25 – 8.75	8.25 – 9.00	8.00 – 9.00
Portland district	**10.00–10.30	*10.30	*10.30
Boston district	** 9.25–10.00	**9.50 –10.00	**9.50 –10.00
Providence district	** 9.30–10.20	**9.50 –10.20	**9.75 –10.20
Philadelphia district	8.25 – 9.00	8.50 – 9.00	8.50 – 9.00
Baltimore district	8.25 – 9.00	8.50 – 9.00	8.50 – 9.00
Norfolk district	8.75 – 9.00	8.75 – 9.00	9.00
Charleston district	9.00	9.00	9.00
Savannah district	9.00	9.00	9.00
Jacksonville district	9.00	9.00	9.00 – 9.25
CALIFORNIA, U. S. MOTOR GASOLINE			
New York harbor	8.25 – 9.00	8.50 – 9.00	8.50 – 9.00
Philadelphia district	8.50 – 9.00	8.75 – 9.00	8.75 – 9.00
Baltimore district	8.75 – 9.00	8.75 – 9.00	8.75 – 9.00
‡DOMESTIC AVIATION GASOLINE			
New York harbor	12.00 –13.00	12.00 –13.00	12.00 –13.00
Philadelphia	12.00	12.00	12.00
Baltimore	12.00 –12.50	12.00 –12.50	12.00 –12.50
Boston	11.50 –13.00	11.50 –13.00	11.50 –13.00

‡Prices are based on U. S. Gov't. specifications or better. Present Gov't. specifications require distillation range of 5% recovery at not more than 167°F., and not less than 122°F.; 50% recovery at 221°; 90% at 311°; 96% at 347°; end point 374° F. Gasoline of fighting grade specifications in some instances sells at a premium over domestic aviation grade. Prices represent majority of quotations.

WATER WHITE KEROSENE			
New York harbor	6.75	6.75	6.75 – 7.25
Philadelphia district	6.50 – 6.75	6.50 – 6.75	6.50 – 7.25
Baltimore district	6.75	6.75	6.75 – 7.25
GAS OIL: 28-34 Gravity			
New York harbor	4.75 – 5.25	4.75 – 5.25	4.75 – 5.25
Boston district	4.75 – 5.00	4.75 – 5.00	4.75 – 5.00
FURNACE OIL: 36-40 Gravity			
New York harbor	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25
Boston district	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25
GRADE C BUNKER OIL (Lighterage 5c per bbl. additional)			
New York Harbor	$1.15	$1.15	$1.15
Boston district	$1.15	$1.15	$1.15
DIESEL OIL			
New York harbor	$2.00 –$2.10	$2.00 –$2.10	$2.00 –$2.10

*Minimum delivered. †Nominal. **Delivered prices.

New York Export Market

(Lubricating oils are per gal. in bbls. F.a.s. New York)

	Aug. 4	July 28	July 21
CYLINDER OILS (Pennsylvania Products)			
Bright stock, dark	30.50 –32.00	30.50 –32.00	30.50 –32.00
600 D filtered	26.50 –28.00	26.50 –28.00	26.50 –28.00
600 Warren E filtered	22.50 –25.00	22.50 –25.00	22.50 –25.00
600 s.r. unfiltered	17.00 –18.00	17.00 –18.00	17.50 –19.00
650 s.r. unfiltered	22.50 –24.50	22.50 –24.50	23.00 –25.00
600 flash, s.r.	24.50 –26.50	24.50 –26.50	24.50 –27.00
630 flash, s.r.	33.00 –35.00	33.00 –35.00	33.00 –35.00
RED ENGINE OILS (Vis. 100°)			
300 vis. No. 6½ color	19.00 –21.00	19.00 –21.00	19.00 –21.00
250 vis. No. 6 color	17.50 –18.50	17.50 –18.50	17.50 –18.50
200 vis. No. 6 color	16.00 –17.00	16.00 –17.00	16.00 –17.00
PALE ENGINE OILS (Vis. 100°)			
230 vis. No. 3¾ color	22.00	22.00	22.00
180 vis. No. 3¼ color	17.50 –18.00	17.50 –18.00	17.50 –18.00
100 vis. No. 2¼ color	14.25 –15.50	14.25 –15.50	14.25 –15.50
MOTOR OILS (Vis. 100°)			
600 vis. No. 7 color	30.00 –32.00	30.00 –32.00	30.00 –32.00
500 vis. No. 6½ color	27.50 –30.00	27.50 –30.00	27.50 –30.00
400 vis. No. 7¼ color	26.00 –29.00	26.00 –29.00	26.00 –29.00
300 vis. No. 6 color	22.00 –26.00	22.00 –26.00	22.00 –26.00
200 vis. No. 6 color	21.00 –23.50	21.00 –23.50	21.00 –23.50

Wax Markets

(Prices in cents per pound, A.S.T.M. tests. A.M.P. F.a.s. carload lots)

NEW YORK	Aug. 4	July 28	July 21
124-126 Yellow crude scale	2.125	2.125	2.125
122-124 White crude scale	2.125– 2.25	2.125– 2.25	2.125– 2.25
124-126 White crude scale	2.125– 2.25	2.125– 2.25	2.125– 2.25
123-125 Fully refined	3.125	3.125	3.125
125-127 Fully refined	3.25 – 3.375	3.25 – 3.375	3.25 – 3.375
128-130 Fully refined	3.50 – 3.625	3.50 – 3.625	3.50 – 3.625
130-132 Fully refined	3.75 – 4.625	3.75 – 4.00	3.75 – 4.00
133-135 Fully refined	4.50	4.50	4.50
135-137 Fully refined	4.625	4.75	4.75
NEW ORLEANS			
124-126 Yellow crude scale	2.125	2.125	2.125
122-124 White crude scale	2.125– 2.25	2.125– 2.25	2.125– 2.25
124-126 White crude scale	2.125– 2.25	2.125– 2.25	2.125– 2.25
123-125 Fully refined	3.125	3.125	3.125
125-127 Fully refined	3.25	3.25	3.25
128-130 Fully refined	3.50	3.50	3.50
130-132 Fully refined	3.75	3.75	3.75
133-135 Fully refined	4.375	4.375	4.375

Gulf Export Market

(Prices are f. o. b. Gulf oil terminals in Texas and Louisiana, shipments of 20,000 bbls. or more unless otherwise noted. Bulk gasoline and kerosene prices are posted quotations of the Export Petroleum Assoc., Inc., governing about 90% of the gasoline and kerosene shipped to foreign ports from the Gulf)

GASOLINE	Prices Aug. 4	Prices July 28	Prices July 21
U. S. Motor	8.00	8.00	8.00
60-62, 400 e.p.	9.00	9.00	9.00
61-63, 390 e.p.	9.25	9.25	9.25
64-66, 375 e.p.	9.50	9.50	9.50
U. S. Motor, cases (cargoes)	$1.80	$1.85	$1.85
64-66, cases (cargoes)	$1.90	$2.00	$2.00
KEROSENE			
44 water white	7.00	7.00	7.00
41-43 prime white	6.00	6.00	6.00
Water white, cases (cargoes)	$1.60	$1.75	$1.75
Prime white, cases (cargoes)	$1.50	$1.65	$1.65
DOMESTIC GAS & BUNKER OILS			
*26-30 translucent gas oil	3.50 – 3.75	3.50 – 3.75	3.50 – 3.75
*30 plus translucent gas oil	3.75 – 4.00	3.75 – 4.00	3.75 – 4.00
Grade C bunker oil	$1.05	$1.05	$1.05
Grade C bunker oil, cargoes	$0.75 –$0.85	$0.75 –$0.85	$0.75 –$0.85

*Less than ½ of 1% sulphur.

MEXICAN CRUDE AND BUNKER OILS (f. o. b. Steamer, Tampico)			
Heavy Panuco crude taxes to be paid	$0.55 –$0.60	$0.55 –$0.60	$0.55 –$0.60
Grade C bunker oil for bunkering purposes, taxes paid	$1.00	$1.00	$1.00
SOUTH TEXAS LUBRICATING OILS (Viscosity at 100°F. cold test 0 Tanker, f. o. b. Houston)			
100 vis. No. 2 unfiltered pale	5.75 – 6.125	5.75 – 6.125	5.75 – 6.125
200 vis. No. 3 unfiltered pale	8.00 – 8.75	8.00 – 8.75	8.00 – 8.75
300 vis. No. 3 unfiltered pale	8.875– 9.50	8.875– 9.50	8.875– 9.50
500 vis. No. 3½ unfiltered pale	10.25 –11.25	10.25 –11.25	10.25 –11.25
750 vis. No. 4 unfiltered pale	12.50 –13.25	12.50 –13.25	12.50 –13.25
1200 vis. No. 5 unfiltered pale	16.00 –18.00	16.00 –18.00	16.00 –18.00
200 vis. No. 5-6 red oil	7.00 – 7.50	7.00 – 7.50	7.00 – 7.50
300 vis. No. 5-6 red oil	8.375– 8.75	8.375– 8.75	8.375– 8.75
500 vis. No. 5-6 red oil	9.25 – 9.50	9.25 – 9.50	9.25 – 9.50
750 vis. No. 5-6 red oil	11.50	11.50	11.50
1200 vis. No. 5-6 red oil	15.00 –15.50	15.00 –15.50	15.00 –15.50

Gulf Domestic Market

(Prices are f.o.b. Gulf oil terminals in Texas and Louisiana in shipments of 20,000 bbls. or more, representing sellers' opinions, for domestic shipment only.)

	Aug. 4	July 28	July 21
U. S. Motor gasoline	7.00 – 7.25	7.00 – 7.25	7.00 – 7.50
41-43 w.w. kerosene	4.875– 5.125	4.875– 5.125	5.00 – 5.375
*26-32 translucent gas oil	3.75 – 4.00	3.75 – 4.00	3.75 – 4.00

*Less than ½ of 1% sulphur.

Pacific Export Market

(Quotations are at seaboard, Los Angeles, in cargo lots, cents per gallon, except where otherwise noted.)

	Aug. 4	July 28	July 21
Gasoline, U. S. Motor, 53-55 Gravity	6.50 – 7.50	6.50 – 7.50	6.50 – 7.50
Gasoline, U. S. Motor-blends and special cuts	7.25 – 8.25	7.25 – 8.25	7.25 – 8.25
Gasoline, 400 e.p. blends	8.00 – 9.25	8.00 – 9.25	8.25 – 9.25
Gas Oil, 30-34, per bbl.	$0.80 –$1.00	$0.80 –$1.00	$0.85 –$1.00
Diesel Oil, 27 plus, per bbl.	$0.80 –$0.95	$0.80 –$0.95	$0.75 –$0.90
Bunker oil, 14-18, per bbl.	$0.65 –$0.90	$0.65 –$0.90	$0.65 –$0.90
Fuel oil, 14-18 per bbl.	$0.60 –$0.85	$0.60 –$0.85	$0.575–$0.85
Kerosene, 38-40 w.w., 125-150 flash, per gal.	4.50 – 5.50	4.50 – 5.50	4.50 – 5.50
Cased Goods			
Gasoline, U. S. Motor	$1.75 –$1.85	$1.75 –$1.85	$1.75 –$1.85
Gasoline, 400 e.p.	$1.85 –$2.00	$1.85 –$2.00	$1.85 –$2.00
Kerosene, 38-40 w.w., 125-150 flash	$1.45 –$1.50	$1.45 –$1.50	$1.45 –$1.50

Note: Above Pacific Export market prices for gasoline and kerosene in cargo lots apply only on goods for coastwise shipment. Gasoline and kerosene prices for shipment to foreign ports are determined as follows: Difference in freight between U. S. Gulf to European Continent and California to European Continent —this difference plus 0.125c for handling, deducted from prices posted at U. S. Gulf by the Export Petroleum Assoc., Inc., which are above prices.

Tanker Rates

(Approximate tanker freight rates to Continental ports, in shillings per ton of 2240 pounds, British sterling; to American ports, cents per barrel.)

	Aug. 4 Crude &/or Fuel	Refined Oil &/or Spirits
Calif. to U. K. or Continental ports*	27	27
Gulf to U. K. or Continental ports*	15–17	14–16
North Atlantic to U. K. or Continental ports*	12/6–14/6	11/6–14
Calif. to North Atlantic ports (not E. of N. Y.)	$0.65–$0.70	$0.65–$0.70
Gulf to North Atlantic ports (not E. of N. Y.)**	18–20	24

*Continental ports in the range between Bordeaux and Hamburg, both inclusive. **Venezuela loading same rate. For Tampico 3c to 4c per bbl. additional.

Smooth and powerful as the product it carries, this efficient Autocar motor truck handles some of the local Cleveland service station deliveries for Cities Service Oil Company. Rated at 3 tons, it has a 177-inch wheelbase, balloon tires, dual rears, the Autocar de Luxe Coupe-type Cab and 802-gallon tank body with four compartments.

Oil for Troubled Waters

Name the country's leading oil companies and you name a list of Autocar users: Cities Service, Standard, Richfield, Sun, Texas, Tydol, Betholine, Sinclair—all are represented. » » » Like pouring oil on troubled waters, Autocar trucks have smoothed out the rough spots in many an oil company's delivery-cost curve. » » » It is to be expected that they should. Precision-building, to the extent that Autocar carries it, is exclusively Autocar's; the great Blue Streak Six engine is exclusively Autocar's; the reputation for dependable and efficient service, anytime, anywhere is exclusively Autocar's. » » » Yet Autocars themselves are not exclusive, for they are as easily within the reach of small oil companies as of large and have, indeed, often been a weighty factor in the early stages of growth of those prominent companies which they now serve so economically and dependably. Buy Autocar trucks.

PRECISION BUILT

AUTOCAR TRUCKS

THE AUTOCAR COMPANY, ARDMORE, PA.

Tank Wagon, Service Station Markets for Gasoline and Kerosene

(OIL PRICE HANDBOOK has t.w. and s.s. markets for a whole year, arranged for quick reference)

These Prices in Effect Aug. 4, 1930, as Posted by Principal Marketing Companies

S.O. NEW JERSEY TERRITORY

	Gasoline T.W.	Tax	Gasoline Total T.W.	Gasoline S.S.	Oil T.W.
Atlantic City, N. J.	14.5	2	16.5	18.5	13.5
Newark, N. J.	13.5	2	15.5	17.5	12.5
Annapolis	14	4	18	20	13
Baltimore, Md.	13.2	4	17.2	19.2	10.5
Cumberland, Md.	15	4	19	21	14
Washington, D. C.	13.7	2	15.7	17.7	12.7
Danville, Va.	14.8	5	19.8	21.8	13.8
Norfolk, Va.	13.3	5	18.3	20.3	11
Richmond, Va.	11.7	5	16.7	18.7	12.7
Roanoke, Va.	14	5	19	20	14
Petersburg, Va.	14.3	5	19.3	21.3	13.3
Charleston, W. Va.	14.5	4	18.5	20.5	12.5
Keyser, W. Va.	15.1	4	19.1	21.1	14.1
Parkersburg, W. Va.	13.2	4	17.2	19.2	11.2
Wheeling, W. Va.	14.4	4	18.4	20.4	12.4
Charlotte, N. C.	15.3	5	20.3	20.3	14.3
Hickorr, N. C.	15.6	5	20.6	22.6	14.6
Mt. Airy, N. C.	15.5	5	20.5	22.5	14.5
Salisbury, N. C.	15.5	5	20.5	20.5	14.5
Charleston, S. C.	13.3	6	19.3	21.3	12.3
Columbia, S. C.	15.2	6	21.2	23.2	14.2

Note: 2c per gallon discount off t.w. price of gasoline to dealers and commercial consumers thru S. O. New Jersey territory.

CONTINENTAL OIL

Denver, Colo.	12	4	16	19	15.5
Pueblo, Colo.	13	4	17	20	15.5
Grand Junc., Colo.	17.5	4	21.5	24.5	19
Casper, Wyo.	15	4	19	22	14
Cheyenne, Wyo.	16.5	4	20.5	23.5	15.5
Butte, Mont.	19.5	5	24.5	*23	20
Helena, Mont.	19.5	5	24.5	27.5	20
Salt Lake City, Utah.	16.5	3½	20	23	17
Boise, Ida.	18.5	5	23.5	26.5	19
Twin Falls, Ida.	18.5	5	23.5	27.5	19
Albuquerque, N. M.	15	5	20	24	15

*4½c discount to dealers at Butte.

S. O. CALIFORNIA

	Gasoline Tax	Posted Retail Price	Posted Wholesale	Oil T.W.
Phoenix, Ariz.	4	17	20	20
Los Angeles, Cal.	3	19.5	21.5	15.5
Fresno, Cal.	3	20	22	17
San Francisco, Cal.	3	20	22	15.5
Reno, Nev.	4	25	27	19
Portland, Ore.	4	21.5	23.5	16.5
Seattle, Wash.	3	20.5	22.5	16.5
Spokane, Wash.	3	24.5	26.5	20.5
Tacoma, Wash.	3	20.5	22.5	16.5

Note: 6c per gal. discount to dealers off posted wholesale price of gasoline to customers taking tank truck delivery, thru S. O. California territory except 1c discount at Phoenix to dealers only. This discount determines net t.w. price.

S. O. LOUISIANA

	Gasoline T.W.	Tax	Gasoline Total T.W.	Gasoline S.S.	Oil T.W.
Little Rock, Ark.	12	5	17	17	12
Alexandria, La.	12.5	*5	17.5	18	†13
Baton Rouge, La.	11.5	4	15.5	16	†13
Lake Charles, La.	12.5	*5	17.5	18	†13
New Orleans, La.	9.5	*5	14.5	14.5	†12
Shreveport, La.	11.5	4	15.5	17.5	†13
Lafayette, La.	12.5	*5	17.5	18	†13
Bristol, Tenn.	14.5	5	19.5	21.5	14
Chattanooga, Tenn.	14.5	5	19.5	20	13
Knoxville, Tenn.	14.5	5	19.5	20	15
Nashville, Tenn.	13.5	5	18.5	19	15
Memphis, Tenn.	12.5	5	17.5	19.5	12.5

Note: 2c per gallon discount off t.w. price of gasoline to dealers thru S. O. Louisiana territory.

*Lake Charles, Alexandria, New Orleans and Lafayette gasoline tax includes 4c state tax and 1c parish tax. New Orleans kerosene price includes 1c parish tax in addition to 1c state tax.

†Kerosene price in Louisiana includes 1c state tax.

S. O. KENTUCKY

	Gasoline T.W.	Tax	Gasoline Total T.W.	Gasoline S.S.	Oil T.W.
Ashland, Ky.	14	5	19	21	15
Catlettsburg, Ky.	14	5	19	21	15
Lexington, Ky.	14	5	19	20	14.5
Louisville, Ky.	13	5	18	20	13
Covington, Ky.	16	5	21	22	14.5
Clarksdale, Miss.	14	5	19	21	12.5
Gulfport, Miss.††	15.5	5	20.5	22.5	13
Jackson, Miss.	12	5	17	19	13
Natchez, Miss.	14	5	19	21	13
Vicksburg, Miss.	14	5	19	21	13
Birmingham, Ala.‡‡	12	4	16	18	14.5
Mobile, Ala.‡	14	4	18	18	13.5
Montgomery, Ala.*	15	4	19	21	15
Atlanta, Ga.	13	6	19	21	†14.5
Augusta, Ga.	16	6	22	24	†15.5
Macon, Ga.	14	6	20	22	†14
Savannah, Ga.	14	6	20	22	†14
Jacksonville, Fla.	13	6	19	21	14
Miami, Fla.	15	6	21	23	14
Tampa, Fla.	14	6	20	22	13
Pensacola, Fla.**	13	6	19	19	13.5

Note: Net price of gasoline to dealers is 2c under posted t.w. price thru S. O. Kentucky territory.

*Local privilege tax of 1 cent on gasoline and ½ cent on kerosene at Montgomery included.

†Georgia kerosene prices include 1c state tax.

**Both tank wagon prices include 1c city tax at Pensacola which went into effect Oct. 15, 1926.

††Both tank wagon prices at Gulfport include Harrison county privilege tax of 2c.

‡Mobile gasoline prices include 1c city tax.

‡‡Birmingham gasoline prices include 1c city tax.

S. O. NEBRASKA

	Gasoline T.W.	Tax	Gasoline Total T.W.	Gasoline S.S.	Oil T.W.
Omaha, Neb.	15.25	4	19.25	19.25	13.25
McCook	16.75	4	20.75	22.75	14.75
Norfolk	15.75	4	19.75	21.75	13.75
North Platte	16.75	4	20.75	22.75	14.50
Scottsbluff	13	4	17	17	14.25

Note: Discounts: 1c per gal. off tank wagon price of gasoline for 1,000 gallon dumps per month to consumers taking tank wagon delivery only.

Latest Changes in Tank Wagon Prices

Gasoline

S. O. Kentucky—S. s. only cut 2c, Jackson, to 19c, same as t. w., **July 25.**

T. w. only cut 1c, Jacksonville, to 19c **July 30.**

T. w. only cut 2c, Jackson, to 17c, **July 29.**

T. w. and s. s. cut 2c, Birmingham, to 16c and 18c, **Aug. 2.**

S. O. Louisiana—S. s. only cut 1.5c, Knoxville, to 20c, t. w. remaining unchanged at 19.5c, **July 30.**

Continental Oil—T. w. and s. s. up 4c, Albuquerque, to 20c and 24c, **July 30.**

S. O. Nebraska—S. s. only cut 2c, Omaha, to 19.25c, same as t. w., **July 29.**

T. w. cut 3.75c, s. s. 5.75c, Scottsbluff, both to 17c, **July 29.**

Magnolia Petroleum—T. w. and s. s. cut 1c, San Antonio, to 13c and 17c, **July 26.**

T. w. and s. s. cut 3c, Fort Smith, to 14c and 15c, **June 25.**

T. w. cut 1c, s. s. 2c, Little Rock both to 17c, **June 18.**

T. w. up 3c, s. s. 2c, Texarkana, both to 17c, **July 5.**

T. w. and s. s. cut 2c, Albuquerqua, to 18c and 22c, **Aug. 2.**

Changes by Magnolia Petroleum were made in the table as of July 28, in the July 30 issue, but due to typographical error were not noted here.

Kerosene

S. O. Kentucky—Kerosene cut 1c, Atlanta, to 14.5c t. w., **July 29.**

Magnolia Petroleum—Kerosene cut 1c, Little Rock, to 12c t. w., **July 18.**

S. O. INDIANA

	Gasoline T.W.	Tax	Gasoline Total T.W.	Gasoline S.S.	Oil T.W.
Chicago, Ill.	15	3	18	19	13
Decatur, Ill.	15.2	3	18.2	19.2	13.1
E. St. Louis, Ill.	14.4	3	17.4	18.4	12.2
Joliet, Ill.	15.4	3	18.4	19.4	13.3
Peoria, Ill.	15.2	3	18.2	19.2	13.1
Quincy, Ill.	15.2	3	18.2	19.2	12.9
Indianapolis, Ind.	15.2	4	19.2	20.2	14.2
Evansville, Ind.	15	4	19	20	14
South Bend, Ind.	15.4	4	19.4	20.4	14.4
Detroit, Mich.	15.8	3	18.8	19.8	14.7
Grand Rapids, Mich.	15.7	3	18.7	19.7	14.6
Saginaw, Mich.	15.9	3	18.9	19.9	14.8
Green Bay, Wisc.	15.6	2	17.6	18.6	13.4
Madison, Wisc.	15.3	2	17.3	18.3	13.1
Milwaukee, Wisc.	15.1	2	17.1	18.1	12.9
La Cross, Wisc.	16.2	2	18.2	19.2	14
Minneapolis, Minn.	16.2	3	19.2	20.2	13.9
Duluth, Minn.	16.5	3	19.5	20.5	13.9
Mankato, Minn.	16.1	3	19.1	20.1	13.7
Des Moines, Ia.	15.5	3	18.5	19.5	13.3
Davenport, Ia.	15.5	3	18.5	19.5	13.3
Sioux City, Ia.	15.1	3	18.1	19.1	12.9
Mason City, Ia.	15.5	3	18.5	19.5	13.3
St. Louis, Mo.	*14.9	2	16.9	17.9	12.3
Kansas City, Mo.	†15.9	2	17.9	18.9	11.6
St. Joseph, Mo.	†15.5	2	17.5	18.5	12.2
Fargo, N. D.	17.9	3	20.9	21.9	15.9
Grand Forks, N. D.	18.2	3	21.2	22.2	16.2
Minot, N. D.	17.9	3	20.9	21.9	15.9
Pierre, S. D.	16	4	20	21	14.4
Huron, S. D.	16.3	4	20.3	21.3	14.7
Wichita, Kans.	13.8	3	16.8	14.8	11.8
Bartlesville, Okla.	13.5	4	17.5	20.5	11.5

S. O. Indiana's quantity contract price schedule thru territory (except in Chicago and Detroit, which see below) on tank truck deliveries of gasoline, figured from the service station price is 2c for 500 gal. or more a month; 2½c for 2,000 gals. or more a month; 3c for 6,000 gals. or more a month; and 4½c for 75,000 gals. or more a month.

In Chicago and vicinity, these discounts apply: Over 500 gals. per month, 4c per gal. off service station price; over 1,000 gals. per month, 5c per gal. off service station price.

In Detroit, dealers and consumers signing contract for all gasoline for one year, get 4c per gal. off s.s. price. Non-contracted accounts get 3c off s.s. price. Those buying 75,000 gals. or more a month, 4½c per gal. off s.s. price.

*Includes city tax of ½c.

†Includes city tax of 1c.

S. O. OHIO

Ohio State wide	16	4	20	21	†14
Allen, Butler, Franklin, Hancock, and Preble Counties:	15	4	19	19	14

Note: Discount to dealers and commercial accounts generally thru Ohio is 2c per gal. off t.w. price with some exceptions. In counties where prices are below normal, discount is 3c per gal. off t.w. price.

†Kerosene t.w. price in Paulding County is 12c; n Allen and Van Wert Counties, 13c.

MAGNOLIA PETROLEUM

Muskogee, Okla.	12	4	16	19	9
Oklahoma City.	11	4	15	18	10
Tulsa, Okla.	12	4	16	20	10
Fort Smith, Ark.†	10	†4	14	15	12
Little Rock, Ark.	12	5	17	17	12
Texarkana, Ark.*	13	4	17	17	12
Dallas, Tex.	10	4	14	18	12
Fort Worth, Tex.	10	4	14	17	11
Houston, Tex.	11	4	15	19	11
San Antonio, Tex.	9	4	13	17	11
El Paso, Tex.	12	4	16	20	13

*Within city of Texarkana, the state tax on gasoline is 4c per gal. conforming with the Texas state tax. In this district outside of the city the 5c Arkansas tax applies.

†Within city of Fort Smith, Oklahoma tax of 4c applies. In this district outside of the city, the 5c Arkansas tax applies.

S. O. NEW YORK

Due to local price conditions at many points in S. O. New York territory, actual prices on both gasoline and kerosene are being made at under the posted tank wagon prices published below.

	Gasoline T.W.	Tax	Gasoline Total T.W.	Gasoline S.S.	Oil T.W.
Greater New York City: Boroughs of Manhattan, Bronx, Queens & Kings	14.3	2	16.3	18.3	11.3
Borough of Richmond	14.7	2	16.7	18.7	11.7
Albany, N. Y.	15.6	2	17.6	19.6	12.6
Buffalo, N. Y.	14.8	2	16.8	18.8	11.8
Rochester, N. Y.	15	2	17	19	12
Syracuse, N. Y.	15.8	2	17.8	19.8	12.8
Boston, Mass.	14.5	2	16.5	18.5	11.5

Above prices include these inspection fees on both gasoline and kerosene, per gallon: **Alabama, 1/40c on gasoline, 1/2c kerosene; Arkansas, 1/20c on both; Florida, 1/8c on both; Illinois, 3/100c on both; Indiana, 4/25c to 1/2c on both; Kansas, 3/50c on both; Louisiana, 1/32c on gasoline; Minnesota, 3/50c on both; Missouri, 3/10c to 1/2c on both; Nebraska, 3/100c on both; North Carolina, 1/4c on both; North Dakota, 1/20c on both; Oklahoma, 4/25c on both; South Carolina, 1/8c on both; South Dakota, 1/10c on both; Tennessee, 2/5c on gasoline and 1/2c to 4/5c on kerosene; Wisconsin, 3/50c on both.**

Kerosene inspection fees only, per gallon; Iowa 7/100c; Michigan 1/5c to 4/5c per gal.

Tank Wagon, Service Station Markets for Gasoline and Kerosene

Prices in Effect Aug. 4, 1930

S. O. NEW YORK

	Gasoline Total				Oil
	T.W.	Tax	T.W.	S.S.	T.W.
Augusta, Me.	15.8	4	19.8	21.8	12.8
Manchester, N. H.	15.4	4	19.4	21.4	12.4
Burlington, Vt.	16.3	4	20.3	22.3	13.3
New Haven, Conn.	15.6	2	17.6	19.6	12.6
Providence, R. I.	14.7	2	16.7	18.7	11.7

Note: S. O. New York allows 3c off t.w. price to dealers in New York City, and 2c off t.w. price thru rest of territory.

ATLANTIC REFINING

Pittsburgh, Pa.	16	*	16	21	13
Philadelphia, Pa.	16	*	16	21	13
Allentown, Pa.	16	*	16	21	13
Erie, Pa.	15	*	15	18	13
Scranton, Pa.	16	*	16	21	13
Altoona, Pa.	16	*	16	21	13
Dover, Del.	16	3	19	21	13
Wilmington, Del.	16	3	19	21	13
Boston, Mass.	14.5	2	16.5	18.5	11.5
Springfield, Mass.	15.5	2	17.5	19.5	12.5
Worcester, Mass.	15.3	2	17.3	19.3	12.3
Fall River, Mass.	14.1	2	16.1	17.1	12.1
Providence, R. I.	14.7	2	16.7	18.7	11.7
Hartford, Conn.	15.5	2	17.5	19.5	12.5
New Haven, Conn.	15.6	2	17.6	19.6	12.6
Atlantic City, N. J.	14.5	2	16.5	18.5	13.5
Camden, N. J.	13.6	2	15.6	17.6	12.6
Trenton, N. J.	14	2	16	18	13
Annapolis, Md.	14	4	18	20	13
Baltimore, Md.	13.2	4	17.2	19.2	10.5
Hagerstown, Md.	14.7	4	18.7	20.7	13.7
Richmond, Va.	13.7	5	18.7	20.7	12.7
Wilmington, N. C.	13.4	5	18.4	20.4	12.4
Brunswick, Ga.	15	6	21	23	**15
Jacksonville, Fla.	14	6	20	21	14

Note: 2c per gal. discount off t.w. price of gasoline on sales to dealers; discount to commercial accounts under contract for one year in accordance with Code of Ethics. Erie has dealer discount of 4c off t.w. price, effective May 28.

*3-cent state tax is collected by retail dealer and paid by him directly to state.

**Georgia kerosene prices include 1c state tax.

V. M. & P. NAPHTHA

(Changes ordinarily occur coincident with gasoline price changes)

	Oleum Sprits	V.M.&P. Naphtha	Cleaner Naphtha
Chicago	14.7	16.7	17
Detroit	17.4	18.9	20.7
Kansas City	†15.9	†17.4	†19.2
Milwaukee	16.4	*19.9	*21.7
Minneapolis	**20.7	**22.2	**24
St. Louis	13.9	17.1	18.9
New York		16	23
Boston		19	23

*Includes 2c state tax. †Includes 1c city tax.
**Includes 3c state tax.

Petroleum Spirits (Solvent)

Tank Cars (F.o.b. refinery or seaboard terminal)

New York harbor	11.00
Philadelphia district	11.00
Providence	11.50

Tank Wagon or Steel Barrels

New York City	15–16
Syracuse	17–18
Rochester	18
Buffalo	17–18
Providence	18–19
Boston	19
Bridgeport	16–18
Newark	16–18
Philadelphia	16–17
Baltimore	18

Note: 2c off above t.w. prices to large buyers in some instances.

CANADA

(Per Imperial Gallon, which is 1.2 American Gallons)

	Gasoline Total				Oil
	T.W.	Tax	T.W.	S.S.	T.W.
ONTARIO					
Toronto	19.5	5	24.5	28	20.5
Ottawa	19.5	5	24.5	28	20.5
North Bay	22.5	5	27.5	33	27
Ft. William	22.5	5	27.5	31	22.5
Border Cities, including Windsor	18.5	5	23.5	27	19.5
MANITOBA					
Winnipeg	21	5	26	30	21.5
SASKATCHEWAN					
Regina	26	5	31	35	26
ALBERTA					
Edmonton	27.5	5	32.5	36	27.5
Calgary	23.5	5	28.5	32	23.5
BRITISH COLUMBIA					
Vancouver	23	5	28	32	24
QUEBEC					
Montreal	20.5	5	25.5	29	21.5
Quebec City	21.5	5	26.5	30	22.5
Three Rivers	21.5	5	26.5	30	22.5
NEW BRUNSWICK					
St. John	20	5	25	29	22
Moncton	20	5	25	29	22
NOVA SCOTIA					
Halifax	20	5	25	29	22
PRINCE EDWARD ISLAND					
Charlottetown	20	5	25	29	22

Note: In districts surrounding these points 1c additional is added to city price.

Aviation Gasoline Prices

Following are tank wagon prices of aviation gasoline in principal marketing territories showing state and municipal taxes:

S. O. NEW JERSEY

Prices in Effect Aug. 4, 1930

	T.W	Tax	Total
Newark, N. J.	17.4	*	17.4
Baltimore, Md.	16.2	4	20.2
Washington, D. C.†	19.5	2	21.5

*New Jersey road tax of 2c does not apply on aviation gasoline, exemption being claimed at time of purchase.

†Price at Washington is on Stanavo Aviation gasoline which sells at a 2c premium over "Standard" aviation gasoline.

S. O. OHIO

Thru Ohio	17	4	21

Discounts given by S. O. Ohio: For air-port delivery only: 2,000 gals. or over per month, 1c per gal.; 6,000 gals. or over per month, 2c; 12,000 gals. and over per month, 3c.

S. O. INDIANA

Chicago	17	3	20
Indianapolis, Ind.	17.2	4	21.2
Detroit, Mich.	17.8	3	20.8
Milwaukee, Wis.	17.1	2	19.1
Minneapolis, Minn.	18.2	3	21.2
St. Louis, Mo.	16.4	2½	18.9
Kansas City, Mo.	16.9	3	19.9
Fargo, N. D.	19.9	3	22.9
Huron, S. D.	18.3	4	22.3
Wichita, Kan.	15.8	3	18.8

In S. O. Indiana territory, buyer pays state and city taxes on aviation gasoline, and if he can get a refund from the state, he does so. St. Louis tax of 2½c includes ½c city tax and Kansas City tax includes 1c city tax.

S. O. LOUISIANA

New Orleans, La.	16	5	21
Nashville, Tenn.	18	5	23
Memphis, Tenn.	17	5	22

2c per gal. discount off above t.w. prices to dealers and commercial consumers.

S. O. NEBRASKA

Omaha	18.25	4	22.25

2c per gal. refund to resellers.

CONTINENTAL OIL CO.

*Denver, Col.	15	4	19
Cheyenne, Wyo.	19.5	4	23.5
Helena, Mont.	25.5	5	30.5
Salt Lake City, Utah	19.5	3.5	23
†Albuquerque, N. M.	19	5	24
Boise, Ida.	19.5	5	24.5

*1c per gal. discount to dealers at Denver. †2c per gal. discount to dealers at Albuquerque.

S. O. CALIFORNIA

Phoenix, Ariz.	17	4	21
Los Angeles, Cal.	19.5	3	22.5
San Francisco, Cal.	20	3	23
Reno, Nev.	24	4	28
Portland, Ore.	19.5	4	23.5
Seattle, Wash.	19.5	3	22.5
Spokane, Wash.	23.5	3	26.5

4c per gal. discount off t.w. price of gasoline to customers taking tank truck delivery, through S. O. California territory, except 1c discount at Phoenix.

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KELLOGG 2-Stage Compressors will supply all required volumes of air at high pressures . . . even up to those needed for truck tires and hydraulic lifts.

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Equipped with Kellogg Pump and Splash Lubricating System
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Patented Intercooler
Multiple V Belt Drive
Copper coil after cooler
Timken bearings.

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ANDERSON-PRICHARD OIL CORPORATION

PRODUCERS REFINERS

OKLAHOMA CITY, OKLA.

Crude Oil Prices (in Effect Aug. 4, 1930)

(Crude prices for the whole year in OIL PRICE HANDBOOK published annually)

EASTERN FIELDS

(Posted by Joseph Seep Purchasing Agency)

(All Penna. Grade Crude Effective July 11, 1930)

Bradford crude in Bradford Transit Co. and New York Transit lines	$2.10
Bradford—Allegheny district (posted by Tide Water Pipe Co., Ltd.)	2.15
Penna. Grade Oil in National Transit Lines (Other Pennsylvania)	*2.05
Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania)	2.00
Penna. Grade Oil in Eureka Pipe Lines (West Virginia)	1.90
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O. district)	1.75
Wayne district crude in Cumberland lines (West Virginia) (Effective July 23, 1930)	1.17
Corning Grade in Buckeye Pipe Lines (Ohio) (Effective July 19, 1930)	1.50
Somerset Oil in Cumberland Pipe Lines (Kentucky) (Effective July 23, 1930)	1.30
Somerset Oil in Eureka Pipe Lines (Effective July 23, 1930)	1.14
Ragland Grade in Cumberland Pipe Lines (Kentucky) (Effective Jan. 29, 1929)	$0.60

*Oil run prior to July 1, 1929 is $2.00 per bbl.

(Posted by Stoll Oil Refining Co.)

Oil City, Ky., oil in Stoll lines (Effective July 25, 1930)	$1.35

MICHIGAN

(Posted by Dixie Oil Co.)

Traverse and Dundee (Muskegon), effective April 16, 1930, same gravity and price schedule as Prairie posts in Oklahoma and Kansas, which see below.

(Posted by Pure Oil Co.)

Midland, Midland County (July 19, 1930)	$1.45

CENTRAL STATES FIELDS

Posted by Ohio Oil Co.

Wooster	$1.70	Princeton	$1.65
Lima	1.55	Illinois	1.65
Waterloo	1.20	Plymouth	1.23
Indiana	1.32	West Kentucky	1.55

CANADIAN CRUDE

Posted by Imperial Oil Refineries, Ltd.

Petrolia	$1.95
Oil Springs	2.02

OKLAHOMA, KANSAS and NORTH TEXAS

Prices of Prairie Oil & Gas Co.

(In Oklahoma and Kansas)

Effective Apr. 10, 1930

Below 25	$0.75	35-35.9	$1.255
25-25.9	0.80	36-36.9	1.29
26-26.9	0.85	37-37.9	1.325
27-27.9	0.90	38-38.9	1.36
28-28.9	0.95	39-39.9	1.395
29-29.9	1.00	40-40.9	1.43
30-30.9	1.05	41-41.9	1.465
31-31.9	1.10	42-42.9	1.50
32-32.9	1.15	43-43.9	1.535
33-33.9	1.185	44 and above	1.57
34-34.9	1.22		

(In North Texas: Ranger, Wichita Falls, Mexia)

Effective Apr. 10, 1930

Below 25	$0.72	30-30.9	$1.02
25-25.9	0.77	31-31.9	1.07
26-26.9	0.82	32-32.9	1.12
27-27.9	0.87	33-33.9	1.17
28-28.9	0.92	34-34.9	1.22
29-29.9	0.97	35-35.9	1.255
36-36.9	$1.29	41-41.9	$1.465
37-37.9	1.325	42-42.9	1.50
38-38.9	1.36	43-43.9	1.535
39-39.9	1.395	44 and above	1.57
40-40.9	1.43		

The Texas Co., same schedule in Oklahoma as Prairie in Oklahoma; and in North Texas, North Central Texas and Central Texas same as Prairie and Humble in North Texas, effective Apr. 10.

Humble Oil & Refining Co. Prices

(Ranger, North Texas, Mexia, Powell, Boggy Creek, Richland, Wortham, Lytton Springs, Currie, Moran and Nocona crudes all in Texas.)

Humble's prices in above fields same as Prairie's prices in North Texas, effective Apr. 10, which see.

Magnolia Petroleum Co.

(In Oklahoma, Kansas and North and East Central Texas)

Below 26	$0.70	28-28.9	$0.88
26-26.9	0.76	29-29.9	0.95
27-27.9	0.82	30-30.9	1.02

Rest of Magnolia schedule up to 44 and above same as Prairie in Oklahoma and Kansas.

Apr. 10, 1930, Glasscock, Crane, Upton, Winkler, Howard and Mitchell Counties same prices as Humble's postings in Winkler, Crane, etc., which see

Corsicana heavy	$0.80
Luling	0.85
Mirando	0.85
Darst Creek, 60° F. gravity	1.15

Carter Oil Co.

(Oklahoma and Kansas)

Apr. 10, 1930, same schedule as Prairie, which see.

PANHANDLE TEXAS

Humble Oil & Refining Co.

Effective Apr. 10, 1930

Hutchinson and Carson Counties:

Below 32	$0.775	38-38.9	$1.065
32-32.9	0.825	39-39.9	1.10
33-33.9	0.875	40-40.9	1.135
34-34.9	0.925	41-41.9	1.17
35-35.9	0.96	42-42.9	1.205
36-36.9	0.995	43-43.9	1.24
37-37.9	1.03	44 and above	1.275

Gray County:

Below 29	$0.755	37-37.9	$1.16
29-29.9	0.805	38-38.9	1.195
30-30.9	0.855	39-39.9	1.23
31-31.9	0.905	40-40.9	1.265
32-32.9	0.955	41-41.9	1.30
33-33.9	1.005	42-42.9	1.335
34-34.9	1.055	43-43.9	1.37
35-35.9	1.09	44 and above	1.405
36-36.9	1.125		

Wheeler County: Posted by Magnolia Pet. Co. Humble withdrew Wheeler county postings Apr. 10.

Below 30	$0.755	37-37.9	$1.11
30-30.9	0.805	38-38.9	1.145
31-31.9	0.855	39-39.9	1.18
32-32.9	0.905	40-40.9	1.215
33-33.9	0.955	41-41.9	1.25
34-34.9	1.005	42-42.9	1.285
35-35.9	1.04	43-43.9	1.32
36-36.9	1.075	44 and above	1.355

Above prices met by The Texas Co. and Magnolia on Apr. 10.

WEST TEXAS AND NEW MEXICO

Humble Oil & Refining Co.

Effective Apr. 10, 1930

Winkler, Crane, Upton, Crockett, Ector, and Pecos Counties, also Lea County, N. Mex.

Below 25	$0.65	31-31.9	$0.86
25-25.9	0.68	32-32.9	0.89
26-26.9	0.71	33-33.9	0.92
27-27.9	0.74	34-34.9	0.95
28-28.9	0.77	35-35.9	0.98
29-29.9	0.80	36 and above	1.01
30-30.9	0.83		

Howard and Glasscock counties:

Effective Apr. 10, 1930

Below 25	$0.65	31-31.9	$0.82
25-25.9	0.68	32-32.9	0.84
26-26.9	0.71	33-33.9	0.86
27-27.9	0.74	34-34.9	0.88
28-28.9	0.76	35-35.9	0.90
29-29.9	0.78	36 and above	0.92
30-30.9	0.80		

Apr. 10, 1930, The Texas Co. posted same prices in Crane, Upton, Winkler and Lea counties as Humble.

SOUTH AND SOUTHWEST TEXAS

(Posted by Humble Oil & Refining Co.)

Effective Apr. 10, 1930

Mirando	$0.85
Salt Flat	1.15
Darst Creek	1.15
Pettus, Bee County	1.40

NORTH LOUISIANA—ARKANSAS FIELDS

Prices of Standard Oil Co. of Louisiana

Caddo, Homer, Haynesville, Bull Bayou, El Dorado, Crichton, De Soto, and Sabine.

Effective Apr. 11, 1930

Below 28	$0.87	36-36.9	$1.29
28-28.9	0.92	37-37.9	1.325
29-29.9	0.97	38-38.9	1.36
30-30.9	1.02	39-39.9	1.395
31-31.9	1.07	40-40.9	1.43
32-32.9	1.12	41-41.9	1.465
33-33.9	1.17	42-42.9	1.50
34-34.9	1.22	43-43.9	1.535
35-35.9	1.255	44 and above	1.57

Cotton Valley, Sarepta and Carterville below 36 gravity, $0.85. Rest of schedule same as Caddo, Homer, etc.

Smackover, below 24	$0.90
do 24 and above	1.05
Bellevue (Apr. 11, 1930)	1.15
*Urania, La. (Apr. 11, 1930)	0.95
†East El Dorado (Calion) (Apr. 11, 1930)	0.90

*Posted by Louisiana Oil Refining Corp.

†Posted by Magnolia Petroleum Co.

Apr. 10, 1930, The Texas Co. same schedule in Louisiana as Standard, plus these grades: 24-24.9, $0.67; 25-25.9, $0.72; 26-26.9, $0.77; 27-27.9, $0.82.

Apr. 11, Magnolia met Standard schedule in Louisiana-Arkansas fields.

STEPHENS, ARKANSAS

Louisiana Oil Refining Corp., and Atlantic Oil Producing Co.

Effective Apr. 11, 1930

Below 28	$0.76	30-30.9	$0.91
28-28.9	0.81	31-31.9	0.96
29-29.9	0.86	32 and above	1.01

GULF COASTAL

Posted by Humble Oil & Refining Co.

Effective Apr. 10, 1930

Grades A	$1.15	34-34.9	$1.30
Grades B:		35-35.9	1.33
Below 25	1.00	36-36.9	1.36
25-25.9	1.03	37-37.9	1.39
26-26.9	1.06	38-38.9	1.42
27-27.9	1.09	39-39.9	1.44
28-28.9	1.12	40-40.9	1.46
29-29.9	1.15	41-41.9	1.48
30-30.9	1.18	42-42.9	1.50
31-31.9	1.21	43-43.9	1.52
32-32.9	1.24	44 and above	1.54
33-33.9	1.27		

Refugio county (rest of schedule, same as Grades B, which see above).

Below 25	$0.85		
25-25.9	1.03		

Fields classified as A and B are Spindletop, Goose Creek, Hull, Liberty, Sour Lake, West Columbia, Orange, Boling, Humble, Pierce Junction, Sugarland and Raccoon Bend. All other fields are Grades A only.

Specifications for Grade "A" crude: Gravity: 25° and below, at 60° F; Viscosity: not less than 100 seconds at 100° F Saybolt. Sulfur: not over .4%.

Grade "B" includes all Coastal crude which does not meet the test for "A" grades.

Crude Price Changes

BRADFORD.—On Aug. 1 Tide Water pipe Co., Ltd., advanced Bradford-Allegheny district crude 5 cents, making new price $2.15 per barrel.

Correction

Prices of Oklahoma and North Texas Grade A natural gasoline on July 28 as published on page 114 of the July 30 issue of NATIONAL PETROLEUM NEWS were incorrect at 4.50 to 4.75 cents. Correct price on July 28 was 4.75 cents flat. Prices are corrected in this issue.

Correction

In the article on page 85, July 30 issue of NATIONAL PETROLEUM NEWS, the statement was made that the low price station in Findlay, Ohio, owned by Maurice Wolfe, president of the Meteor Motor Car Co., Piqua, Ohio, was selling gasoline at 19 cents, plus a rebate of one cent in the form of a merchandise premium coupon.

Mr. Wolfe states his price at all his stations in Ohio was 18 cents, with coupons the value of one cent being given with each gallon of gasoline or quart of oil.

Mr. Wolfe emphasizes the point that the station was opened selling at 15 cents, which included a profit of two cents.

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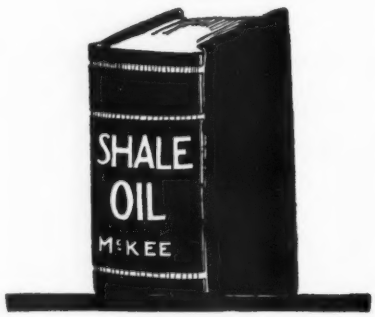

If you are interested in the great problem of supplying the world with fuel—get a copy of SHALE OIL.

It is written by men who have devoted years to the investigation of oil shale resources and their uses. R. H. McKee, professor of chemical engineering, Columbia Univ., is chief editor, and other oil shale specialists have contributed chapters as follows:

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THE second edition of "The Elements of Fractional Distillation" by Clark S. Robinson is just out.

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The last four chapters discuss the distillation and rectification of petroleum and natural gasoline, and the design of apparatus. Rectification of complex hydrocarbon mixtures, of natural gasoline, analysis of the data on weathering of natural gasoline; design of topping units with single and multiple columns; method of Lewis and Wilde for determination of the number of plates in a rectifying column is outlined, with tables and curves to be used.

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Crude Oil Prices (in Effect Aug. 4, 1930)

(Prices are per barrel at the well)

(Crude Oil Prices for the whole year in OIL PRICE HANDBOOK published annually)

GULF COASTAL

Prices of The Texas Co.

Effective Apr. 10, 1930

Grades A.....$1.15 *Grades B.....$1.00

*Grades B include all heavy crudes which do not meet tests for Grades A or for Grades B light crude. Prices for Grades B light crude are the same as Humble's, which see.

ROCKY MOUNTAIN FIELDS

Prices of Ohio Oil Co., and Midwest Refining Co.

(Salt Creek prices effective Apr. 10, 1930)

‡Salt Creek 29–29.9	$1.00
" " 30–30.9	1.05
" " 31–31.9	1.10
" " 32–32.9	1.15
" " 33–33.9	1.185
" " 34–34.9	1.22
" " 35–35.9	1.255
" " 36–36.9	1.29
" " 37 and above	1.325
Elk Basin	1.55
Grass Creek light	$1.55
Big Muddy	1.38
Lance Creek	1.63
Rock Creek	1.35
Mule Creek	1.20
Rex Lake	1.10
‡Osage	1.63
‡Cat Creek, Mont.	1.55
Sunburst, Mont.	1.65
‡Hogback, N. Mex.	1.40
Artesia, N. Mex.	1.05

‡Posted by Midwest Refining Co. Midwest also buys Grass Creek light and Elk Basin.

CALIFORNIA

Standard Oil Co. of California

(Effective March 11, 1930)

Gravity	Signal Hill Seal Beach Alamitos Heights Huntington Beach Inglewood* Olinda-Brea Canon*	Athens Rosecrans Dominguez	Elwood Terrace	Torrance Richfield	Whittier La Habra	Montebello	Coyote	Santa Fe Springs (Effective June 14, 1930)	Newhall McKittrick Kern River	Midway-Sunset Elk Hills Buena Vista Hills Lost Hills	Coalinga	Wheeler Ridge	Kettleman Hills	Orcutt (Santa Maria) (Union Oil Co.)	Santa Paula (Ventura) (Union Oil Co.)	Ventura Avenue (Associated Oil Co.)
14–14.9**	$0.70	....	....	$0.70	$0.70	$0.70	$0.70	....	$0.55	$0.55	$0.55	$0.55	....	$0.55	$0.70	$0.70
15–15.9	.70	....		.70	.70	.70	.70	....	.55	.55	.55	.55	....	.55	.70	.70
16–16.9	.70	....		.70	.70	.70	.70	....	.55	.55	.55	.55	$1.65	.55	.70	.70
17–17.9	.70	....		.70	.70	.70	.70	....	.55	.55	.55	.55	for	.55	.70	.70
18–18.9	.76	....		.76	.76	.71	.76	....	.55	.62	.62	.62	55°	.65	.75	.76
19–19.9	.82	....		.82	.82	.77	.82	....	.55	.70	.70	.70	gravity	.70	.80	.82
20–20.9	.88	....		.88	.87	.83	.87	....	....	.78	.78	.78	and	.78	.85	.88
21–21.9	.94	....	F. o. b. ship	.94	.93	.90	.93	$0.92	....	.86	.86	.86	over	.90	.90	.91
22–22.9	1.00	....	....	1.00	.98	.97	.98	.95	....	.94	.94	.94	....	.95	.97	.94
23–23.9	1.07	....	....	1.07	....	1.05	1.04	1.01	....	1.02	1.02	1.02	....	1.02	1.05	1.00
24–24.9	1.14	1.14	....	1.14	....	1.11	1.10	1.07	....	1.09	1.07	1.07	....	1.10	1.08	1.07
25–25.9	1.21	1.19	....	1.21	....	1.17	1.16	1.13	....	1.16	1.12	1.12	....	1.18	1.13	1.14
26–26.9	1.28	1.24	....	1.28	....	1.23	1.23	1.19	....	1.23	1.17	1.17	....	1.26	1.18	1.21
27–27.9	1.35	1.29	....	1.35	....	1.29	1.30	1.25	....	1.30	1.23	1.22	....	....	1.23	1.28
28–28.9	1.42	1.34	....	1.42	....	1.35	1.37	1.31	....	1.35	1.27	....	....	....	1.28	1.35
29–29.9	1.46	1.39	....	†1.46	....	1.38	1.41	1.37	....	1.41	1.31	....	....	....	1.33	1.39
30–30.9	1.50	1.45	....	†1.50	....	1.41	1.45	1.43	....	1.47	1.35	....	....	....	1.39	1.43
31–31.9	1.55	1.51	....	....	....	....	....	1.49	....	1.53	1.39	....	....	....	1.45	1.48
32–32.9	1.60	1.57	....	....	....	....	....	1.55	....	1.59	1.43	....	....	....	1.51	1.53
33–33.9	....	1.64	....	....	....	....	....	1.60	....	1.65	1.47	....	....	....	1.58	1.59
34–34.9	....	1.71	1.32	....	....	....	....	1.65	....	††1.71	1.51	....	....	....	....	1.65
35–35.9	....	1.78	1.39	....	....	....	....	1.70	....	††1.77	1.55	....	....	....	....	1.71
36–36.9	....	1.84	1.46	....	....	....	....	1.75	....	....	....	....	....	....	....	....
37–37.9	....	1.90	1.53	....	....	....	....	1.80	....	....	....	....	....	....	....	....
38–38.9	....	1.96	1.60	....	....	....	....	1.85	....	....	....	....	....	....	....	....
39–39.9	....	2.02	1.66	....	....	....	....	1.90	....	....	....	....	....	....	....	....
40–40.9	....	2.08	1.72	....	....	....	....	....	....	....	....	....	....	....	....	....
41–41.9	....	2.14	1.78	....	....	....	....	....	....	....	....	....	....	....	....	....
42–42.9	....	2.20	1.84	....	....	....	....	....	....	....	....	....	....	....	....	....

*Inglewood prices run only to 28.9 gravity; Olinda-Brea Canon to 31.9 gravity.
†Richfield crude only. ††These two grades apply on Lost Hills only.
**Standard does not contract for crude testing below 14 gravity, but pays 45c per barrel when purchased.

REFINERS' and COMPOUNDERS' SUPPLIES

Following are average market prices for materials used by refiners and compounders effective on the date shown.

Refiners' Supplies

	Aug. 4	July 28
Soda Ash light 58% bags, cwt.	$1.32	$1.32
Silicate of Soda 60 deg. drums, cwt.	$1.55	$1.55
Silicate of Soda 40 deg. tank cars, cwt.	$0.60	$0.60
Silicate of Soda 40 deg. drums cwt.	$0.80	$0.80
Sal Soda wks.	$1.00-1.05	$1.00-1.05
Caustic Soda 76% solid, cwt.	$2.90	$2.90
Sulfuric Acid 60 deg. tank cars, f.o.b. shipping point per ton	$11.00	$11.00
Oleum 20%, fuming sulfuric, tank cars, wks.	$18.50	$18.50
Sulfur, flowers of cwt.	$3.10-4.00	$3.10-4.00
Liquid Chlorine, tank cars, wks. lb.	3.50-5.00	3.50-5.00

Compounders' Supplies

Vegetable Oils

	Aug. 4	July 28
Linseed carloads, spot lb.	13.60	13.60
Tanks, spot	13.20	13.20
Soya Bean, Tank, coast lb.	8.50–9.00	8.50–9.00

Oleic Acid

Distilled, tanks lb.	8.25	8.25
Distilled, bbls. lb.	9.125	9.125
Saponified, tanks lb.	8.50	8.50
Saponified, bbls. lb.	9.375	9.375

Lard Oils

Prime Winter Strained lb.	13.125	13.125
Extra Winter Strained lb.	11.00	11.00
Extra lb.	10.75	10.75
Extra No. 1 lb.	10.00	10.25
No. 1 lb.	10.00	10.00
No. 2 lb.	9.75	9.75
Tallow oil lb.	10.00	10.00

Neatsfoot Oil

Pure, bbls. lb.	13.00	13.00
Extra, bbls. lb.	11.00	11.00
No. 1 bbls. lb.	10.50	10.50
Cold Pressed lb.	17.25	17.50

Fish Oils

Menhaden Oil		
Light Pressed gal.	57–58	57–58
Light Pressed, tank cars, N. Y. gal.	47–48	47–48
White bleached gal.	57–58	57–58
Yellow bleached gal.	51–54	51–54
Whale, extra winter bleached, gal.	85	85

Naval Stores

Steam, distilled turpentine, N. Y. gal.	40	40
Steam distilled turpentine, Savannah gal.	39	39
Gum turpentine, N. Y. gal.	44	44
Gum turpentine, f.o.b. cars Savannah gal.	38.25	38.25
Wood Rosin, N. Y. gal.	$5.26	$5.26
Wood Rosin F, Savn'h bbl.	$4.50	$4.50
Gum Rosin B, N Y bbl.	$5.65–$5.85	$5.65–$5.85
Gum Rosin B, f.o.b. cars Savannah bbl.	$4.90	$4.90
Rosin oil, pure gal.	57	57
Rosin Oil, compounded gal.	50	50

Pine Tar

Kiln burnt bbl.	$13.00–14.00	$13.00–14.00
Retort bbl.	$13.50–14.50	$13.50–14.50

Alcohol

Denatured Formula 5, in bbls., per gal.	44–46	44–46

OIL STOCKS AND FINANCES

Three of 13 Companies Report Profit Gain

CLEVELAND, Aug. 4.—Additional income reports received the last week from 13 companies for the first half of 1930 show only three netted more this year than in the first six months of 1929. These companies are: Amerada Corp., Phillips Petroleum Co., and H. F. Wilcox Oil & Gas Co.

Amerada and Wilcox netted more in the second quarter of 1930 than in the second quarter of 1929. The Phillips statement indicates its income may have been larger this year. An accurate comparison cannot be made for Phillips because the company did not deduct depreciation and depletion reserves last year and did so this year.

Several of the other companies reported relatively small declines in net earning this year as compared with last but a few reported large recessions in income. One company turned from the profit to the loss column.

Second quarter and first half summaries follow:

Three Months	1930	1929
Amerada Corp.	$477,645	$303,352
Barnsdall Corp.	1,946,845	2,226,881
Continental Oil	*2,120,518	*3,842,081
Independent Oil & Gas	778,085	1,616,205
Lion Oil Refining	17,339	518,106
Louisiana Oil Refg.	*47,810	*743,273
Panhandle Prod. & Refg.	‡73,768	66,537
Phillips Petroleum	3,033,555	†4,897,928
Skelly Oil	736,274	2,028,728
Texas Pacific	†273,519	†541,513
Wilcox Oil & Gas	430,374	155,175
Six Months	**1930**	**1929**
Amerada Corp.	$401,060	$354,114
Barnsdall Corp.	3,367,440	4,115,253
Continental Oil	*2,643,820	*2,200,526
Independent Oil & Gas	1,521,280	3,635,055
Lion Oil Refg.	*19,054	*502,287
Louisiana Oil Refg.	*47,810	*743,273
Panhandle P. & R.	‡36,542	99,457
Phillips Petroleum	10,200,525	†8,510,807
Signal Oil & Gas	623,521	666,382
Skelly Oil	1,283,784	3,198,936
S. O. Kansas	381,766	459,939
Texas Pacific	†647,553	†963,655
Wilcox Oil & Gas	514,291	222,784

*Before federal taxes. †Before depreciation and depletion. ‡Loss.

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All grades of lubricating oils and greases.

The National Refining Co.
Cleveland, Ohio

Crew Levick Buys Eastern Service Stations

PHILADELPHIA, July 31.—The first company-owned service stations in Pittsburgh of the Crew Levick Co. are the eight purchased in July from Fred J. Fournier.

It also recently purchased the eight service stations and one bulk plant of the Sunshine Oil Co., Rochester, N. Y., according to Ben Baum, of the Crew Levick Co.

Max, Morris and Jacob H. Cohen had owned the Sunshine company. A dinner July 22 at Rochester, celebrating the purchase, was attended by some 300 dealers, customers and employes of both companies. C. E. Foster, general manager of the Crew Levick company, was present. Jack Cohen was toastmaster.

A similar dinner was held in Pittsburgh July 25 after the acquisition of the Fournier stations. Among those attending were Mr. Foster, H. C. Gibson, manager of the western Pennsylvania division of Crew Levick and about 100 dealers and employes.

The company first entered Rochester in 1925 when it bought the bulk plants of the Indiana Refining Co.

Both the Rochester and Pittsburgh purchases afford the Crew Levick Co. its own distribution for the first time in these two territories.

Richfield to Sell More Stock Privately

LOS ANGELES, Aug. 2.—Richfield Oil Co. of California is issuing 250,000 additional shares of common stock at not less than $17 a share. This will make Richfield's offerings this year 350,000 shares of the $25 common. It is understood the stock is to be sold privately and no public offering will be made.

The company's bank loans have grown to $9,500,000 from $5,300,000 at the beginning of this year, it is said in banking circles here. However, the company is reducing its inventories which exceeded $20,000,000 Jan. 1.

CLEVELAND, Aug. 2.—Great Western Oil Co., Cleveland, has announced election of B. W. Brown as chairman of the board, and J. M. Hollister as president. The Great Western operates a compounding plant in Cleveland and has gasoline and oil distribution in Cleveland, Indianapolis, Grand Rapids, Detroit, and North Tonawanda, N. Y.

Financial Notes

Pan-American Petroleum & Transport Co.—Application made to list 58,278 additional B shares on the New York Stock Exchange to be used in acquiring shares of Lago Oil & Transport Co. not already owned by Pan American. This number is said to be 112,356 shares.

Sinclair Consolidated Oil Corp.—Reports in New York are that Sinclair will shortly retire its preferred stock of which $15,177,500 was outstanding May 26, and also the series D bonds of which $15,462,500 are outstanding. Retirement will be from funds other than the $72,500,000 the company is to receive from the Standard Oil Co. of Indiana for its half interest in the Sinclair Pipe Line Co. and Sinclair Crude Oil Purchasing Co.

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Here's the Meter That Invites Your Most Exacting Tests

RUGGED, simple and accurate — the Buffalo Gasoline Meter invites your most exacting tests. Many large users have tested this meter under the most exacting conditions and have proved its unfailing accuracy.

Rugged. The gears of the Buffalo Gasoline Meter are enclosed in a sturdy, cast semi-steel alloy casing — especially compounded for the exclusive use of the Buffalo Meter Company. Every mechanical part is specially treated so that nothing has been left undone to make this meter meet modern conditions of service.

Simple. There is but one piston used in the Buffalo Gasoline Meter. *The single piston is of the positive displacement, nutating type, the simplest of any.* There are but two submerged gears and their design and construction is such that they will wear almost indefinitely. The gear train is totally enclosed and has only the single worm and spur gearing. Should any mechanical difficulty arise it is but the work of a few seconds to remove the gears for service.

Accurate. Because of the rugged construction and the simplicity of the mechanism of Buffalo Gasoline Meters, accuracy is fully maintained for hundreds of thousands of gallons.

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For your information, send for a copy of the new Buffalo Meter book, entitled "Buffalo Gasoline Meters Overcome Competition."

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Signed Individual _____

Firm Name _____

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City _____ *State* _____

Transactions in Oil Shares on New York Stock Exchange

1929 High	1929 Low	1930 High	1930 Low	Listed Shares	Par Value	Company	Div. Rate	Last Paid	Transactions Week Ended Aug. 2 Sales	First	High	Low	Last	Change
42 5/8	17 1/2	42 1/4	20 1/2	922,075	N.P.	Amerada Corp.	50cQ	July 31, 30	12,400	25	26 1/4	23	25 1/2	+ 1
64 3/4	12 1/2	37	15 1/4	209,180	N.P.	American Republics Corp.	....	.....	800	19	20 3/8	18 1/2	18 1/2	— 1 5/8
47 1/4	34 1/2	51	32 1/2	2,240,000	$25	Associated Oil	50cQ	June 30, 30	10	40	40	40	40	0
77 7/8	30	51 3/8	30 1/8	2,683,868	25	Atlantic Refining Co.	‡25cQ	June 16, 30	26,800	38	39 5/8	36 1/4	37 1/8	— 1 5/8
49 1/8	20	34	20 1/2	2,257,108	25	Barnsdall Corp. A.	50cQ	Aug. 6, 30	15,000	23 1/2	24	22 7/8	23 1/4	— 1/4
34 1/2	25	35	28	2,060,966	25	California Petroleum Corp.	....	Jan. 1, 29	.....	.....	.....	.....	.....	.....
32 7/8	12 1/2	20 5/8	12 1/4	1,444,970	N.P.	Colonial Beacon Oil Co.	....	.....	700	14 5/8	14 5/8	14 1/2	14 1/2	— 1/2
37 3/4	18	30 1/2	18 3/8	4,610,258	N.P.	Continental Oil (Delaware)	.....	.....	21,300	21 7/8	22 1/4	20 1/2	20 3/4	— 3/4
94 3/4	42 1/4	71 1/8	39	410,857	$100	General Asphalt Co.	$1Q	June 16, 30	3,200	47	47	44 3/4	45 1/4	— 1 5/8
109	26	116 7/8	52 1/4	250,000	100	Houston Oil	....	.....	58,400	88 7/8	90 3/4	81 3/4	84 7/8	— 4
39 3/8	17 3/4	32	19 3/8	1,379,295	N.P.	Independent Oil & Gas	50cQ	July 31, 30	1,000	22 1/4	22 1/4	21 1/4	21 1/4	— 1
53	13 1/4	28 3/4	8 7/8	699,066	10	Indian Refining	....	Dec. 15, 20	21,300	14	14	12	12 3/8	— 1 1/2
51 1/4	11 1/2	27 3/4	8 1/8	568,816	10	do certificates	....	.....	.....	.....	.....	.....	.....	.....
38 3/8	16 1/2	29 1/2	21 1/4	3,994,150	N.P.	Lago Oil & Transport	....	Aug. 2, 27	1,500	29 1/2	29 1/4	28 3/8	28 3/8	— 7/8
18	7	12	8	1,187,701	N.P.	Louisiana Oil Refining	.....	.....	2,400	9 3/4	9 3/4	8 1/2	8 1/2	— 1/2
100 1/4	80	89 1/2	80 1/8	40,000	$100	do pfd.	$1.62 1/2Q	Aug. 15, 30	.....	....	....	....	....	.....
18 1/2	5 7/8	10 3/8	4 1/2	330,000	N.P.	Maracaibo Oil Exploration	....	.....	.....	....	....	....	....	.....
295	176	180	174	459,428	$100	Mexican Petroleum	$3Q	July 31, 30	.....	....	....	....	....	.....
105	102	...	...	120,000	100	do pfd.	$2Q	July 31, 30	.....	....	....	....	....	.....
69 3/4	9 1/4	37	16 1/4	1,244,383	N.P.	Mexican Seaboard Oil	....	Oct. 15, 24	42,500	24	24 3/4	21 1/2	22 5/8	— 1 3/8
39 1/4	22 1/8	33	22 1/8	1,899,138	N.P.	Mid-Continent Petroleum	50cQ	Aug. 1, 30	1,100	24 1/8	24 1/4	23 3/4	24	0
3 3/8	3/4	2 1/2	7/8	908,171	N.P.	Middle States Oil ctfs.	....	.....	1,500	1 1/8	1 1/8	1	1	— 1/8
69	40 1/4	64 1/4	51 5/8	1,000,000	$50	Pan American Petrol. & Trans.	....	Oct. 20, 27	200	58 5/8	58 5/8	58 5/8	58 5/8	— 3/8
69 1/4	40 1/2	67 1/2	50 1/2	2,422,221	50	do B	....	Oct. 20, 27	1,200	59	59 1/8	58 5/8	58 7/8	— 5/8
15 1/4	3	12 3/4	4 1/8	199,370	N.P.	Panhandle Prod. & Refg.	....	.....	300	7 1/2	7 1/2	7 1/2	7 1/2	0
76	47 1/2	80	47 1/2	25,666	$100	do pfd.	....	July 2, 23	100	72	72	72	72	— 1
...	...	27 1/4	18 3/4	2,937,900	N.P.	Petroleum Corp. of America	37 1/2cQ	June 30, 30	6,100	21	21	20 3/8	20 1/2	— 5/8
47	24 1/4	44 3/4	29 1/8	2,670,089	N.P.	Phillips Petroleum Co.	50cQ	June 30, 30	132,200	33 3/4	34	32	33	— 3/8
3 3/8	1	2 1/2	1	1,184,917	$25	Pierce Oil Corp.	....	.....	2,800	1 1/8	1 1/4	1	1 1/4	+ 1/8
51 1/2	20	52	20 1/4	150,000	100	do pfd.	....	Feb. 1, 22	.....	.....	.....	.....	.....	.....
5 7/8	1/2	7 1/8	2 1/4	2,500,000	N.P.	Pierce Petroleum Corp.	.....	.....	5,100	5 1/2	5 1/2	5	5 1/4	— 1/4
65 5/8	40 1/2	54	35 5/8	2,435,670	$25	Prairie Oil & Gas Co.	50cQ	June 30, 30	600	37 1/4	37 1/2	36 7/8	37	— 3/4
65	45	60	44 1/8	4,050,000	25	Prairie Pipe Line Co.	‡75cQ	June 30, 30	3,400	46 1/4	46 1/2	45	45	— 1 1/2
25 7/8	4	11 7/8	6 1/2	749,017	50	Producers & Refiners Corp.	....	Sept. 15, 30	300	8	8	8	8	0
46 3/4	25 1/2	38	30	56,907	50	do pfd.	....	May 4, 25	.....	.....	.....	.....	.....	.....
30 3/4	20	27 1/4	19 1/2	3,038,370	25	Pure Oil Co.	37 1/2cQ	June 2, 30	4,800	21 3/4	22 1/2	21 1/2	21 1/2	— 1/4
116	108	114 1/4	110 1/2	130,000	100	do 8% pfd.	$2Q	July 1, 30	200	112 1/2	112 7/8	111 1/2	112	— 1/2
49 3/8	22 5/8	28 1/4	14 3/4	2,101,550	25	Richfield Oil (California)	50cQ	May 15, 30	11,000	18 1/4	18 1/4	17 1/4	17 1/4	— 1/2
42 1/2	15	25 3/4	16 1/4	1,235,270	N.P.	Rio Grande Oil Co.	50cQ	July 25, 30	2,700	17 3/8	17 3/4	17	17 3/8	— 1/8
64	43 1/8	56 1/2	49 1/8	951,310	$13.40	Royal Dutch (N. Y. shares)	$1.875	Aug. 13, 30	5,500	54 1/8	54 1/4	51 5/8	52	— 1/4
55 3/4	43 3/8	48 3/8	42 3/8	77,492	£2	Shell Trans. & Trading	$1.453	July 28, 30	60	45 7/8	46	45 7/8	45 7/8	+ 1 5/8
31 3/4	19	25 1/2	18	13,069,076	N.P.	Shell Union Oil Corp.	35cQ	June 30, 30	6,800	19 3/8	19 3/8	18 3/8	19 3/8	+ 1/8
...	...	106 1/4	95	400,000	100	do pfd.	$1.37 1/2Q	July 1, 30	1,200	100 3/8	100 3/8	98	100	— 3/8
40 1/8	15	37	18	869,255	10	Simms Petroleum Co.	40cQ	June 14, 30	4,500	22 1/2	23	20 1/8	21	— 1 1/2
45	21	32	20 5/8	5,455,665	N.P.	Sinclair Consolidated Oil Corp.	50cQ	July 15, 30	45,100	24 7/8	25 1/4	23 1/4	24 1/4	— 3/4
111	103	112 1/4	108	154,685	100	do pfd.	$2Q	Aug. 15, 30	200	111 3/4	111 3/4	111 3/4	111 3/4	+ 1 1/4
46 1/2	42	42	28 1/2	1,097,650	$25	Skelly Oil Co.	50cQ	June 16, 30	1,900	30 7/8	31	29 1/8	29 1/2	— 1 1/4
...	...	99 3/4	88	120,000	100	do pfd.	$1.50Q	Aug. 1, 30	600	91 1/2	91 7/8	88 1/4	88 1/4	— 3 1/4
...	...	104 1/4	98	750,000	100	S. O. Export Corp. pfd.	$2.50S.A.	June 30, 30	300	102 1/8	102 1/4	102 1/8	102 1/4	+ 1/4
81 7/8	51 1/2	75	55 1/2	13,016,434	N.P.	S. O. California	62 1/2cQ	June 16, 30	6,800	62 1/8	62 1/8	62	62 3/4	0
...	...	49	29	320,000	$25	S. O. Kansas	50cQ	June 16, 30	100	32 1/2	32 1/2	31 1/4	31 1/4	— 2 1/4
83	48	84 7/8	58	25,443,643	25	S. O. New Jersey	‡25cQ	June 16, 30	269,800	74 1/4	75 3/8	76 3/8	72 1/4	— 1 7/8
48 1/8	31 3/4	40 3/8	30	17,809,530	25	S. O. New York	40cQ	June 16, 30	25,200	32 5/8	32 3/4	31 5/8	32 1/8	— 3/8
86 3/8	55	70	50	1,416,911	N.P.	Sun Oil Co.	25cQ	June 16, 30	200	59 1/8	59 1/8	58 1/4	58 3/8	— 1/8
105 1/2	100	105 1/8	102 1/2	100,000	$100	do pfd.	$1.50Q	June 2, 30	240	104 1/2	108	104	108	+ 3
24	5 1/4	9 3/8	2	1,026,979	N.P.	Superior Oil Corp.	....	.....	38,700	4 1/2	4 1/2	†2	2 3/4	— 2
71 7/8	50	60 1/2	50 1/8	9,850,724	$25	The Texas Corp.	75cQ	July 1, 30	8,600	53	53 3/8	52 1/8	52 7/8	— 1/8
23 7/8	9 1/2	14 1/2	8 1/4	929,947	10	Texas Pacific Coal & Oil	s2 1/2%	Dec. 31, 29	1,200	9 5/8	9 5/8	9 1/8	9 1/8	— 3/8
23 1/2	10	17 3/4	10 3/4	5,881,980	N.P.	Tide Water Associated Oil	30cS.A.	Aug. 15, 30	22,000	14 3/8	15 1/8	13 1/2	13 7/8	— 1/4
90 7/8	74 1/8	89 3/4	78	732,550	$100	do pfd.	$1.50Q	July 1, 30	500	84 7/8	84 7/8	84	84 1/2	+ 3/4
40	14	31	19 1/2	2,191,820	N.P.	Tide Water Oil Co.	20cQ	June 30, 30	.....	.....	.....	.....	.....	.....
97 1/2	85 1/8	94 7/8	83	199,443	$100	do pfd.	$1.25Q	Aug. 15, 30	200	90	90	90	90	+ 4 3/4
...	...	24	16 1/4	3,339,150	N.P.	Transcontinental Oil	30c	May 1, 30	17,000	18 3/4	18 3/4	18 1/8	18 1/8	— 3/8
57	42 1/8	50	37	2,201,008	$25	Union Oil Co. (California)	‡50cQ	Aug. 9, 30	1,500	41 1/4	41 1/2	40 1/2	41	0
...	...	38 1/2	25 1/4	1,254,048	N.P.	Union Tank Car Co.	40cQ	June 2, 30	1,500	28 7/8	28 7/8	27 3/4	27 3/4	0
42 7/8	15	27	12 3/4	777,603	N.P.	Warner Quinlan Co.	25cQ	July 3, 30	4,000	13 1/2	13 3/4	13 1/4	13 1/4	— 1/2
38	25	29 1/2	26	490,000	N.P.	White Eagle Oil & Refg.	50cQ	Apr. 20, 30	.....	.....	.....	.....	.....	.....
29 3/4	12 7/8	21	11 1/2	428,967	N.P.	Wilcox Oil & Gas Co.	....	May 10, 28	600	16 1/2	16 1/2	16	16 1/2	0

*New high †New low ‡Also extra s-Stock Total sales 845,210

Ohio Limits Height of Oil Bottles

CLEVELAND, Aug. 2.—Most motor oil bottles in use in Ohio fall within the limitations set by the Ohio sealer of weights and measures in new specifications recently issued. Some of the bottles which are filled and sealed at bulk stations exceed the limit by 1½ inches.

The limits are: two quarts, 12¾ inches; one quart, 10½ inches, and one pint, 8¼ inches. When the metal or glass spout is integral with the bottle the heights may be 6 inches more. This makes a maximum of 16½ inches for the commonly used quart bottle.

The new specifications also provide that the capacity of the bottle shall be permanently marked on the side or at the bottom where the manufacturer's name or trademark appears. A graduation line shall also be placed in or on the bottle. The bottom of the line shall be level with the meniscus of the water used to test the capacity of the bottle.

These tolerances are allowed: two quart bottle, 12 drams or 2.7 cubic inches; one quart, 8 drams or 1.8 cubic inches, and one pint, 6 drams or 1.4 cubic inches.

The Ohio Marketers Association has been assured that Ohio will not insist on a metering device for the dispensing of gear compound Jan. 1, 1931, but will insist that dispensing equipment be calibrated to pints and not pounds.

Pittsburgh Stock Exchange

Transactions Week Ended Aug. 1, 1930

	Sales	High	Low	Last	Change
Ark. Nat. Gas.	435	10 5/8	10	10 1/2	0
do pfd.	78	8	7 7/8	8	0
Leonard Oil.	100	1 3/4	1 3/4	1 3/4	+ 1/4
Lone Star Gas.	4,220	40	38 1/2	39	0
do pfd.	200	106	106	106	—1
Plymouth Oil.	3,160	27 1/4	26 1/2	27	+ 1/2
Pgh. Oil & Gas.	25	2 1/2	†2 1/2	2 1/2	— 1/8
Phoenix Oil.	2,500	c.65	.50	.60	—c.05
Shamrock O. & G.	2,595	18 1/4	17	18 1/4	+1

†New low.

Pittsburgh Curb Market

Transactions Week Ended Aug. 1, 1930

	Sales	High	Low	Last	Change
Arkansas Gas A.	15	10	10	10	— 1/8

N. P. N. Service Record

Some of the requests for information, data and advice, which were taken care of in various National Petroleum News offices in the past week are:

National taxicab company told how to determine volume of gasoline at various temperatures and referred to Bureau of Standards circular No. 154 which gives tables for making temperature corrections.

* * *

Chicago oil company given names and addresses of 14 manufacturers of devices for reclaiming used crankcase oils.

* * *

Washington, D. C. jobber referred to 12 N. P. N. articles telling how to make volume corrections for temperature in tank cars.

* * *

Refiner referred to four compre- hensive N.P.N. articles on hydrogenation published 1926-1927 and to one on page 63 of last week's issue.

* * *

Kentucky equipment manufacturer told of plans for new refining plants in New Mexico and Texas.

* * *

Illinois inquirer referred to three engineering companies for information on how to remove water from bitumen.

* * *

Pennsylvania jobber furnished with tank wagon, service station and dealer prices of gasoline at Pennsylvania and Ohio points.

* * *

Chief engineer of Pennsylvania coal company called N.P.N. New York office for name of chief engineer of world-wide producer-refiner-marketer.

* * *

Librarian of leading producer-refiner-marketer asked for Col. George A. Burrell's articles on modern refining in pamphlet form.

* * *

Canadian oil importer furnished names and addresses of ten principal California refiners who might be source of oil shipments into British Columbia.

* * *

Kentucky oil operators referred to possible source for range map of Fresno county, Cal.

* * *

Missouri oil company referred to articles on giving instructions to service station attendants and told of course in station salesmanship offered oil companies.

A. G. Laessig Organizes Company

ST. LOUIS—A. G. Laessig, son of C. H. Laessig, organizer of, and for most of its years, president of the Automobile Gasoline Co., St. Louis, has taken over its old bulk plant and started business in June as Laessig's Oil Products, Inc. The son had been with his father for many years. The father sold his company last fall to the Shell Petroleum Corp.

Young Mr. Laessig arranged to lease the bulk plant from the Shell. The new company has its general offices at 1718 Boatmen's Bank Bldg. It will be the distributor of all Silver Flash products in and around St. Louis. It specializes on commercial business only. It does not own any service stations and is not handling any business to dealers.

C. H. Laessig is now on a long auto tour, going east to New York this week and then up to Canada, back over the Canadian Rockies to the Pacific Coast, and home the middle of September.

Pan American Markets New Motor Oils

NEW YORK, July 30—A new brand of seven motor oils is being marketed in the East by the Pan American Petroleum & Transport Co. It will be introduced in the South shortly. These oils retail at 30 to 35 cents per quart.

The seven grades meet S. A. E. viscosity specifications, ranging from light to ultra heavy. The color is red with a greenish cast. Refinement has eliminated virtually all wax, the company said. Pour test on the three light grades is 5 degrees above zero F. and 10 to 15 above on the remainder. The company says the oils have excellent heat resisting qualities and low carbon forming tendencies.

Pan American is strongly in favor of S. A. E. viscosity numbers in the dispensation of lubricants. To promote the use of these numbers charts have been prepared which show the numbers for various types of motors. Included also is useful information showing crankcase, transmission, differential, gasoline tank, and coding system capacities for all passenger cars.

The eastern territory served by Pan American embraces New Jersey, Connecticut, Rhode Island, Massachusetts, Maine and New York. Fifteen distributors are handling the oils in this area. They are being sold also through numerous retail outlets.

Around 450 bulk plants in Georgia, Florida, Alabama, Louisiana, Mississippi and Tennessee are maintained by the company and southern distribution will be handled from these.

The South American trade will be served from bulk plants in Brazil, Venezuela and Colombia. Operations possibly will be extended to include numerous other countries in South America and also parts of Europe. The oils will also be sold in Mexico.

These oils were developed, the company said, to meet requirements of the high compression engine which, driven in all kinds of weather and under varying traffic conditions, needs an oil that deposits a minimum of carbon, withstands excessive temperatures, and has a low pour test for winter operation.

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Copy must reach us not later than Friday preceding date of issue.

All advertisements carried on this page are payable in advance.

Advertisers having box numbers should be addressed in care of National Petroleum News, 1213 West 3rd Street, Cleveland, Ohio, unless otherwise specified.

Standard Oil Stocks on New York Curb

1929 High	1929 Low	1930 High	1930 Low	Outstanding Shares	Par Value	Companies	Div. Rate	Last Paid	Transactions Week Ended Aug. 2 Sales	First	High	Low	Last	Change
18¾	13½	18½	12¼	.....	£1	Anglo-Amer. Oil voting stk. ctfs..	36c	June 5, 29	.....	....	....	....	....	.....
17⅛	11	19	12	.....	£1	do non-voting stk. ctfs.....	36c	June 5, 29	.....	....	....	....	....	.....
2½	¾	1	⅜	500,000	N.P.	Atlantic Lobos Oil.....	....	.....	200	½	½	½	½	0
4⅛	1	1⅛	1¼	200,000	$50	do pfd.....	....	.....	.....	....	....	....	....	.....
46½	25	25	14	40,000	25	Borne Scrymser Co.....	$1S.A.	Apr. 15, 30	.....	....	....	....	....	.....
74¼	55	69	55¼	200,000	50	Buckeye Pipe Line Co.....	$1Q	June 14, 30	100	55⅞	55⅞	55⅞	55⅞	— ¼
210	130	184⅞	140½	120,000	25	Chesebrough Mfg. Co.....	‡$1Q	June 30, 30	100	154¾	154¾	154¾	154¾	+ ¾
11¾	5⅜	7⅜	5½	.....	N.P.	Creole Petroleum Co.....	....	.....	8,800	6½	6⅝	6¼	6⅜	+ ⅛
75¾	40	65¾	30½	30,000	$ 50	Cumberland Pipe Line Co.....	$1Q	June 16, 30	.....	....	....	....	....	.....
70½	42	54¾	40	50,000	100	Eureka Pipe Line Co.....	$1Q	Aug. 1, 30	.....	....	....	....	....	.....
....	....	6¾	2½	280,000	N.P.	Galena Oil Corp. w.i.....	....	.....	200	4⅛	4⅛	4⅛	4⅛	+ ⅛
....	....	37¼	30	.....	N.P.	General Petroleum Corp. w.i.....	....	.....	400	32	32¼	32	32¼	+ ¼
128	74½	119	78	2,974,645	$25	Humble Oil & Refg. Co.....	50cQ	July 1, 30	2,900	91	91	88⅜	88⅜	— 2⅝
41	22	30	18⅛	26,490,741	N.P.	Imperial Oil, Ltd.....	12½cQ	June 2, 30	3,600	20	20⅜	19⅞	20⅛	— ¼
42¼	26	41	31⅞	300,000	$10	Indiana Pipe Line Co.....	‡50cQ	Aug. 15, 30	100	32¾	32¾	32¾	32¾	+ ⅜
29⅛	15	24	17⅝	14,247,880	N.P.	International Petroleum Co.....	25c	June 16, 30	9,900	19⅛	19¼	18⅝	19⅛	0
25⅞	10½	22⅜	15⅛	509,000	$12½	National Transit Co.....	25cQ	June 16, 30	1,800	17	17	16⅛	16⅞	— ⅛
17¾	10	21	10⅜	100,000	10	New York Transit Co.....	40cQ	July 15, 30	500	17⅜	18	17⅜	18	+ ¼
63	41	54	35½	40,000	50	Northern Pipe Line Co.....	$2S.A.	July 1, 30	.....	....	....	....	....	.....
79⅞	64⅛	75¾	62⅛	2,400,000	25	Ohio Oil Co.....	$1Q	June 14, 30	600	66¼	66¼	65	65½	+ ¼
105½	103¾	108	103	600,000	100	do pfd.....	$1.50Q	June 14, 30	800	105	105	105	105	0
44½	18⅝	32	17	400,000	25	Penn Mex. Fuel Co.....	$1	May 20, 30	600	23	23	22	22	+ 2
50	29	33	14⅝	160,000	25	Solar Refining Co.....	$1.25S.A.	Dec. 20, 29	.....	....	....	....	....	.....
23½	13	20⅜	13	100,000	10	Southern Pipe Line Co.....	$5	June 2, 30	200	18¼	18¼	18	18	+ 1⅛
60¾	35⅛	45⅞	35	1,200,000	25	South Penn Oil Co.....	‡50cQ	June 20, 30	200	36½	37	36½	36½	— 1
70	45	64	45¼	35,000	50	Southwest Pa. Pipe Lines.....	$1Q	July 1, 30	.....	....	....	....	....	.....
63	45	59⅜	47⅜	16,850,587	25	S. O. Indiana.....	62½cQ	June 16, 30	19,600	51	51⅜	50¼	50⅝	— ⅜
46⅞	29	40½	30½	2,577,124	10	S. O. Kentucky.....	40cQ	June 30, 30	7,900	32⅜	32¼	31¾	32	— ⅜
50¼	40	48⅞	44¼	188,159	25	S. O. Nebraska.....	‡62½cQ	June 20, 30	.....	....	....	....	....	.....
129	60	108½	77	560,000	25	S. O. Ohio.....	62½cQ	July 1, 30	50	78½	79¾	78½	79¾	+ 1¼
124½	113½	122	115¼	70,000	100	do pfd.....	$1.75Q	June 2, 30	70	118	118¼	117⅜	117⅜	+ ⅞
18	5⅜	10	5	34,158	25	Swan Finch Oil Corp.....	....	Jan. 15, 29	.....	....	....	....	....	.....
133¾	75⅜	97⅞	76¼	5,139,887	25	Vacuum Oil Co.....	$1Q	June 20, 30	8,900	86¼	87½	85	85½	— 1½

*New high †New low ‡Also extra

Independent Oils on New York Curb

1929 High	1929 Low	1930 High	1930 Low	Par Value	Companies	Transactions Week Ended Aug. 2 Sales	First	High	Low	Last	Change
.72	⅛	⅜	1/16	$1	Amer. Contr. Oilfields	300	1/16	1/16	1/16	1/16	0
8⅝	1⅜	4½	1½	5	Amer. Maracaibo....	500	2¼	2⅜	2¼	2¼	0
4¾	1	1⅜	1⅛	10	Argo Oil.....	100	1⅛	1⅛	†1⅛	1⅝	+ 1/16
26	3¾	16¾	8¾	N.P.	Arkansas Nat. Gas....	700	10¼	10⅝	9⅝	10	— ¾
24¾	6½	16⅝	8¼	N.P.	do Class A.....	7,000	10¼	10¼	9⅜	9½	— ⅞
9	4	8⅛	7⅜	10	do pfd.....	.....	....	....	....	....	.....
70	50	28½	17	N.P.	British American Oil..	.....	....	....	....	....	.....
4⅞	⅞	2¾	¾	¼	Carib Syndicate.....	500	1⅜	1⅜	1¼	1¼	0
68½	20	44¼	24⅛	N.P.	Cities Service.....	100,000	29⅛	29⅝	27⅞	28½	— ½
99¼	84	93⅞	52	100	do pfd.....	100	91	91	90¼	90¼	— ⅝
9¼	8	9	7⅝	10	do pref. B.....	.....	....	....	....	....	.....
96	81	89¾	82	100	do pref. BB.....	.....	....	....	....	....	.....
1⅜	¼	⅜	¼	1	Colombia Syndicate..	500	3/16	3/16	1/16	1/16	0
15	3⅞	8¼	3½	N.P.	Colon Oil Corp.....	1,100	3¾	3⅞	3¾	3⅞	+ 1/16
....	....	21	8⅛	N.P.	Columbia Oil & Gas...	7,100	8½	8⅝	†8⅛	8¼	— ¼
11⅜	2½	5⅞	3½	10	Consolidated Royalty	.....	....	....	....	....	.....
135	42	74¾	32	N.P.	Cosden Oil Co.....	18,400	40½	45	40½	44⅛	+ 3⅞
87	55	70	60⅞	100	do pfd.....	.....	....	....	....	....	.....
2½	¼	1	¼	N.P.	Crown Central Pet...	800	½	½	⅜	⅜	— ¼
11⅜	4	....	....	N.P.	Crystal Oil.....	.....	....	....	....	....	.....
51¾	51¼	....	....	100	do pfd.....	.....	....	....	....	....	.....
26	6½	13½	7¼	N.P.	Darby Petroleum....	200	13	13	13	13	0
....	....	21¾	21½	N.P.	do new.....	.....	....	....	....	....	.....
11	2	11	4½	N.P.	Derby Oil & Refg.....	1,400	7⅛	7⅛	7	7	— ⅛
44	17	60	30	N.P.	do pfd.....	.....	....	....	....	....	.....
....	....	12	12	10	Devonian Oil.....	.....	....	....	....	....	.....
209	115	166⅞	117½	$25	Gulf Oil Corp.....	3,800	127	128¾	124⅝	124⅝	— ¾
7½	1⅜	4	2¼	N.P.	Homaokla Oil.....	.....	....	....	....	....	.....
....	....	47½	26⅝	N.P.	Indian Territory A..	400	32⅛	32⅛	32	32	— ⅛
....	....	53½	26⅞	N.P.	do B.....	800	32⅛	32⅛	32⅛	32⅛	+ ⅛
2⅞	⅛	1⅞	¾	10	Intercontinental Pet..	5,800	¾	⅞	¾	¾	— 1/16
3⅜	1¼	3	1⅝	N.P.	Kirby Petroleum....	300	1¾	1¾	1¾	1¾	0
6½	1	4¾	1½	N.P.	Leonard Oil & Dev..	5,800	1¾	1¾	1⅝	1¾	— 1/16
38⅞	18	29	18⅝	N.P.	Lion Oil Refg.....	4,800	21⅜	21⅜	18¾	20	— 2
67⅛	28	55⅛	34⅛	N.P.	Lone Star Gas.....	4,800	39⅞	40¼	38⅛	39	+ 1
....	....	31	17	$25	MacMillan Petrol....	.....	....	....	....	....	.....
2⅛	¼	½	⅜	1	Magdalena Synd.....	800	¼	¼	¼	¼	0
38½	14	16	12	N.P.	Margay Oil.....	.....	....	....	....	....	.....
6⅜	2¼	7½	2	N.P.	Mexico Ohio Oil.....	300	2½	2½	2½	2½	0
....	....	11⅜	4½	N.P.	Middle States A.v.t.c.	1,200	6¼	6¼	6	6	— ¼
....	....	6	2⅜	N.P.	do Class B. v.t.c.	1,700	2¾	2¾	2⅜	2⅜	— ⅛
42	8	36¼	15	5	Missouri-Kansas P.L.	10,900	21	23⅜	21	21⅝	+ ⅝
1½	¼	⅝	⅛	1	Mountain & Gulf Oil..	2,900	½	½	⅜	⅜	— ⅛
22⅞	7	12⅛	8	10	Mountain Producers..	1,300	8⅞	9⅜	8⅞	9⅜	+ ½
43⅞	24	41⅜	25¼	N.P.	Nat. Fuel Gas.....	4,900	31⅞	32½	30⅝	30⅝	— 1⅜
5	2¼	3½	2⅜	$5	New Bradford Oil....	100	2⅝	2⅝	2⅝	2⅝	0
4⅜	3⅛	3⅛	2⅜	10	New England Fuel...	.....	....	....	....	....	.....
24½	11⅜	16⅞	10⅜	25	N. Y. Pet. Royalty..	1,100	10⅜	11¼	10⅜	10⅜	— 1⅛
18½	6⅜	11¼	6	N.P.	North Central Texas	.....	....	....	....	....	.....
19¼	8⅛	11⅜	7¼	N.P.	Oilstocks Ltd. A.....	.....	....	....	....	....	.....
18¼	8½	11½	8½	N.P.	do B.....	.....	....	....	....	....	.....
26⅜	12⅛	19½	12½	N.P.	Pacific Western Oil...	500	15⅜	15½	15⅜	15½	0
3½	½	2½	½	N.P.	Pandem Oil.....	14,300	¾	¾	½	⅝	— ⅛
10½	2¼	4⅜	1⅞	N.P.	Pantepec Oil.....	1,400	2⅛	2⅛	2	2	0
25½	13⅜	13⅞	13¼	$25	Paragon Refg. B. ctfs.	.....	....	....	....	....	.....
28	17	29	19¼	N.P.	Petroleum Corp.....	.....	....	....	....	....	.....
....	....	5⅞	2⅝	....	do warrants.....	800	3¾	3¾	3½	3½	— ¼
37	22	27½	20⅞	N.P.	Plymouth Oil	1,900	26½	27¼	26½	27¼	+ ⅞
16	9	10½	8⅛	$5	Red Bank Oil.....	100	8⅛	8⅛	8⅛	8⅛	0
8½	1⅜	5⅜	2⅛	N.P.	Reiter-Foster Oil.....	600	3⅝	3⅝	3¼	3¼	— ⅝
25¼	19	23½	17½	25	Richfield Oil pfd.....	300	19¼	19¼	19	19	0
29	13	25	14	N.P.	Root Refining pr. pfd.	200	19½	19¾	19½	19¾	— ¼
11	3	8⅜	3⅜	N.P.	Ryan Consolidated...	100	4⅛	4⅛	4⅛	4⅛	0
5⅞	1⅞	2½	1⅜	10	Salt Creek Consol.....	200	1¾	1¾	1¾	1¾	0
25⅞	9	15¼	8¼	10	Salt Creek Producers	1,100	10⅝	11⅞	10⅝	11	+ ½
33⅜	10	....	7½	25	Shreveport El Dorado	200	8	8	†7½	7½	— 2½
....	....	39⅛	39	25	Signal Oil & Gas A..	.....	....	....	....	....	.....
24	9	17	9	N.P.	Southland Royalty..	200	9¾	9¾	9½	9½	— ¼
12	4	10	5	5	Sunray Oil.....	800	5¾	6	5⅝	5¾	+ ¼
23	7⅛	15¼	8⅛	N.P.	Texon Oil & Land...	100	13¾	14	13¾	14	— ¼
81⅛	8¾	16	8	10	Venezuela Mexico....	.....	....	....	....	....	.....
6½	1⅜	4½	2	5	Venezuela Petroleum.	500	2¾	2⅞	2⅝	2⅝	— ¼
9¼	2	5	2	1	Woodley Petroleum..	200	4¼	4¼	4¼	4¼	0
5⅜	¼	2½	½	N.P.	Y Oil & Gas.....	600	1⅛	1¼	½	½	— ½

*New High †New Low

New York Bonds

Week Ending Aug. 1

	High	Low	Last	Change
Assoc. Oil gold 6s.....	103½	102¾	103½	+ ½
Atlantic Refg. deb. 5s....	102¼	102	102	—1
Cal. Pet. 5s.....	100⅛	100	100⅛	+ ⅛
Cal. Pet. 5½s.....	102⅜	102	102	— ¼
General Pet. 5s.....	102	102	102	0
Humble Oil & Refg. 5s....	102	101½	102	+ ¼
Humble Oil & Refg. 5½s	102¾	101⅞	102½	+ ⅝
Pan Amer. P & T 6s.....	104¼	103½	103½	— ¾
Pan Amer. P & T 6s.....	90⅝	90	90	— ¼
Phillips Pet. 5¼s.....	96⅜	93⅝	96⅜	+1½
Pure Oil 5½s.....	100	99¾	99¾	— ¼
Pure Oil 5½s.....	98¾	98½	98⅝	— ⅛
Richfield Oil Calif. 6s....	89⅜	88¾	89	+ ⅛
Shell Union Oil 5s.....	97¾	96¾	97⅜	+ ½
Shell Union Oil 5s with war.	99¾	99¼	99½	+ ⅛
Sinclair Con. Oil 7s.....	104¾	104¼	104¾	+ ¼
Sinclair Con. Oil 6½s...	104	103½	103¾	— ⅛
Sinclair Con. Oil 6s D...	100¼	100⅛	100⅛	— ⅛
Sinclair Con. Crude 5½s.	102⅜	102⅛	102¼	0
Sinclair Pipeline.....	101½	101⅛	101⅛	0
Skelly Oil 5½s.....	96½	95	95	— ⅞
S. O. N. J. 5s.....	104½	104	104	— ¼
S. O. N. Y. 4½s.....	99⅜	99	99⅜	+ ⅛
Transcontinental Oil 6½s war.....	109¾	109⅜	109½	0
Transcontinental Oil 6½s Ex-war.....	101½	100½	101½	+ 1
Union Oil of Calif. 6s A..	109	108¾	109	+ ¼
Union Oil of Calif. 5s C..	101	100⅝	100⅝	— ⅜
Union Oil of Calif. 5s war.	100¼	100	100¼	+ ¼
Warner-Quinlan 6s.....	81½	81	81	— ⅛
White Eagle Oil 5½s war.	104½	104½	104½	— ¼

New York Curb Bonds

Week Ending Aug. 1

	High	Low	Last	Change
Beacon Oil 6s '36.....	103½	103½	103½	— ½
Cities Serv. 5s '66.....	82⅞	82½	82½	— ⅝
Cities Serv. 5s '50.....	101½	100	100	— ⅛
Cities Serv. G. 5½s '42..	83	82¾	83	0
Cities Serv. G. P. 6s '43.	92⅛	91⅜	92½	+1¼
Cont. Oil 5¼s '37.....	97	97	97	0
Empire O & R 5½s '42..	83⅞	83	83⅞	+ ⅞
Gulf Oil 5s '37.....	103	101½	103	+1⅜
Gulf Oil 5s '47.....	103	102¼	102½	— ¾
Indep. Oil 6s '39.....	104	103¼	103½	— ½
Sun Oil 5½s '39.....	102	101½	101½	— ½
Valvoline Oil 7s '37.....	102	102	102	0

Oil Dividends

	Amount	Payable	Stock of Record
General Asphalt q.....	$1	Sept. 15	Sept. 2
Pure Oil q.....	37½c	Sept. 1	Aug. 8
S. O. California q.....	62½c	Sept. 15	Aug. 15
S. O. New Jersey q.....	25c	Sept. 15	Aug. 16
do extra.....	25c	Sept. 15	Aug. 16
S. O. N. Y. q.....	40c	Sept. 15	Aug. 15